HEALTH DEPARTMENT.

REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING

1909

BY THE

MEDICAL OFFICER OF HEALTH.

PC 1088

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BY

E. W. HOPE, M.D., D.Sc.,

Medical Officer of Health.





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Table of Total Deaths registered in the City.

PREFACE.

The magnitude of the subject of the Health Administration of so large a City as Liverpool renders it impossible to deal with all aspects of the question in as full detail as they deserve, but the following pages deal, however briefly, with most of the important features.

Decreased Birth Rate.

The table on page 5 shows the decrease in the birth-rate during the last 25 years. This decrease has, however, been even more pronounced in other parts of the country, and notwithstanding the decline in Liverpool, the birth-rate in this city is still amongst the highest, being exceeded by only two towns having a population of more than 100,000.

Decreased Death Rate.

The rate of mortality for the year 1909 is 18·3, a fraction lower than 1908, and the same as 1907, which had been the lowest recorded. But the sanitary progress of the City has been most encouraging, the further marked decline in the prevalence of typhoid fever, the diminution of deaths from typhus fever to six—the lowest ever recorded—as well as the lessening of the phthisis mortality also to the lowest ever recorded, may be specially alluded to as evidences of successful sanitary effort; the mortality rate from zymotic diarrhœa of infants is also to be placed in the same category as being the lowest on record. (Pages 28, 30 and 41.)

It must be remembered that there will always be included in the death returns of Liverpool the deaths in hospitals of a number of persons who do not belong to the City, but which tend to swell the general death-rate. To these must be added persons who have died at sea and brought into the Port, or whose bodies have been found in the River Mersey, and brought into a Liverpool dock.

Deaths in Public Institutions.

In Liverpool the proportion of deaths which takes place in Public Institutions is larger than is the case in other towns, and the fact is an interesting one, as something may be learned of the social conditions of a locality when so large a proportion in times of sickness seek refuge in public institutions, more especially in the workhouses. Generally it implies poverty and want; but on the other hand, it may also, and no doubt does, imply that the institutions have a wide reputation, and

attract sufferers to them not only from within the city, but from a distance. Probably both of these conditions exercise influence; but be that as it may, the fact remains that there is no provincial city in which so large a proportion of the deaths takes place in workhouses and hospitals. (Pages 9, 12 and 13.)

Infant Mortality.

It is well known that infant mortality varies widely, not only in different towns, but in the various wards or districts of the same towns. Poverty or riches, sanitary or insanitary conditions, occupation or the want of it, high birth rate or low, all play their part in bringing these variations about. But every extended inquiry into the intricate subject of infant mortality brings to light the fact that parents living approximately under the same social and sanitary conditions have such varying success in rearing their infants that the personal factor deserves a careful study.

Nearly two years ago the attention of the Education Committee was called to the facilities afforded by the Day Nurseries for instructing elder girls in the care and management of infants, but unhappily these facilities are not yet availed of for the purpose. (Page 18.)

Decreased Death Rate from Scarlet Fever.

Upon the interesting chart facing page 34 will be seen the death-rate from scarlet fever in the City of Liverpool during the last sixty years. For the first half of this period, at intervals of a year or so, the number of deaths resulting from scarlet fever reached proportions which would now be regarded with astonishment, but from the period when hospital provision was found for the isolation of patients, and better administrative methods, aided by various Acts of Parliament, were adopted, there has been a remarkable drop in the fatality from this disease. The lesson is an important one, and may well be applied to other forms of infectious sickness, such as measles and whooping cough, which, although presenting difficulties of their own, would no doubt diminish in amount if a more complete isolation were possible. (Page 32.)

Hospital Accommodation for Measles.

Hospital accommodation for a limited number of cases of measles has now been made, but the deaths from measles do not show a decline comparable to that which has taken place in the forms of infectious disease for which hospital accommodation is available. In the great number of homes in which measles occur, isolation in the house is difficult or impossible. In making arrangements for hospital

isolation of measles, difficulties of a special kind arise owing to the tender age of the patient, and the peculiarities of the infection in this form of disease. The tendency to recur at intervals of about 18 months is well illustrated in the accompanying diagrams. There has, however, been no considerable outbreak since May, 1906, until this year, although the prevalence of the disease during 1907 and 1908, as compared with former inter-epidemic periods, was more general. (Page 35.)

Whooping Cough.

Notwithstanding the difficulties in the way, isolation for a limited number of cases of whooping cough has been found, and some lessening of this disease may be expected with confidence. Experience has repeatedly shown that the introduction of a case of whooping cough into a court has resulted in the spread of the infection to practically the whole of the infant population in that court. (Page 37.)

Tuberculosis and its decline.

The steady decline in the mortality from the various forms of tuberculosis which has been so prominently associated with improved sanitation has continued during the past year.

A Sub-Committee consisting of members of the Hospitals Committee and of the Health Committee was appointed early in the year to specially consider the various aspects of the question of tuberculosis, and any further means which might be taken to accelerate its diminution. (Page 49.)

There are many analogies between tuberculosis and the various forms of communicable disease, and Sanitary and Poor Law Authorities alike have long since recognised that communicable diseases are most suitably dealt with by the former Authority. A great many difficulties would be removed by the whole question of tuberculosis being dealt with by one Authority, viz., by the Authority which is responsible for the Public Health. The time may be approaching for a further advance in dealing with tuberculosis by the transfer to the Sanitary Authority of such responsibilities connected with tuberculosis as are at present accepted by the Poor Law Authorities, apart from the destitution resulting from it. The subject is a large and intricate one, involving many adjustments, and probably also additional powers in dealing with consumptives, especially those whose conduct and habits of life render them dangerous to others.

Decline of Tuberculosis.

A highly gratifying feature in regard to tuberculosis is the remarkable decline in the disease which in the last half century has accompanied the progress of improved sanitation in the country, a decline which, if it stood as the only result of preventive measures, would fully justify the expenditure involved. No other forms of pulmonary disease, for example, bronchitis or pneumonia, show any decline at all comparable with it, nor any indication of being similarly affected by measures of general sanitation.

In order to correctly appreciate this decline, it is of the utmost importance to thoroughly grasp and understand the conditions with which tuberculosis was associated at the period of its maximum prevalence, and to study the circumstances which, step by step, have preceded or accompanied the remarkable decline referred to. Unless this is done, no correct estimate can be formed either of the circumstances operating in its causation or of the relative value of the various preventive measures which have been adopted. These matters have been fully dealt with in previous reports, which show that, in Liverpool, the condition of large numbers of the dwellings alone in bygone years constituted, so far as tuberculosis was concerned, a gigantic experiment upon man. Nothing is more useful or instructive than a careful study of the difficulties encountered and the results of the millions of money and the years of labour expended in remedying these evils, their step by step diminution, and the coincidental decline of this disease. (Table, page 48.)

Notification of Phthisis.

The voluntary notification of phthisis and other forms of tuberculosis has now been in operation eight years. The experience so gained has been very valuable and has certainly facilitated the work in connection with the compulsory notification of pauper consumptives. It is doubtful whether the compulsory notification of all forms of tuberculosis would result at present in any great administrative advantage, but no hardship would result, and professional medical opinion would probably approve of it.

The rate of mortality from phthisis in Liverpool shows, besides the general decline, another interesting point, and that is, that of late years the maximum mortality is taking place at a later age; in other words, death is postponed and useful life prolonged. For example, during the last three years ending 1909, there is a decline at each age period up to 50 years of age.

Policy of Corporation.

The efforts of the Corporation have been directed with a view to approximate the living places and the surroundings of the people to the requirements of sanitation, in other words, to remove the breeding places of disease, and to substitute conditions as favourable as it is possible for people to live under. These works, needless to say, cannot be regarded as finished, notwithstanding demolition of insanitary property, re-housing of the dispossessed, the provision of wide streets and open spaces, parks and gardens, baths and other similar necessaries for health.

No one familiar with the sanitation of cities would suggest that if the Corporation, instead of following the policy indicated, had left untouched the slums and insanitary conditions, and had provided hospitals for disease as it was bred, that the same results would have been obtained; the experience of what remains forbid absolutely any such inference. But if such a policy had been pursued, and hospital accommodation had been provided for the whole of the cases of phthisis as they arose, the probability is that the Corporation to-day—whilst in possession of an enormous hospital establishment, which in construction and current expenses would have swallowed up as much money as has been spent in the whole sanitary administration of the City—would also have been in possession of breeding-places for the disease which would produce enough phthisis to tax these Hospitals to their utmost capacity, whilst all other evils of insanitation would have been untouched. Clearly this reflection shows that with phthisis, as with other diseases, prevention is better than cure, and attention must not be diverted from the preventive aspects by prospects (often illusory) which are held out of cure.

Home Visits.

The work of visiting and re-visiting patients at their homes would be still more effective if it were done by a Medical man rather than an Inspector, and his services would be more valuable in helping to link up the various agencies at present dealing with tuberculosis. The Medical Officer of Health has already made this recommendation to the Special Joint Committee on Tuberculosis, who have unanimously approved it. (Page 58.)

Public Health aspects of the Medical Inspection of School Children.

For many years prior to the passing of the Education (Administrative Provisions) Act of 1907, the children of the City called for a very large share of the attention of the Public Health Department, and the interests of this section of the community had to an extent been safeguarded by special legislation.

It is amongst children that infectious disease is most rife, and it is they who constitute the bulk of the patients in the City Hospitals. These observations include all children, but while the Act of Parliament which provides for medical inspection deals only with children who attend school, yet it has proved beneficial, not only to these, but indirectly to those who have not yet reached the school age.

The Education Department, and the Public Health Department, have for many years been in close touch; and a very large number of communications have daily passed between them The decision of the City Council to follow the advice of the Board of Education and of the Local Government Board to link up in the closest possible way the medical inspection of school children with the Public Health Department has already borne fruit which fully confirms the wisdom of the proceeding. The provisions of the Act have in fact furnished an opportunity to fill up some of the gaps and remove some of the defects which previously existed. (Pages 120 and 150.)

Four Medical Inspectors and the Health Committee's Staff

The work of the four Medical Inspectors appointed by the Education Committee is supervised by the Medical Officer of Health, who is also Medical Officer to the Education Authority. At each examination of school children the Female Inspector of the district is present to render assistance to the doctor. Being thoroughly familiar with the district, frequently knowing many of the children personally, she renders valuable assistance in following up cases at their homes; in the course of the inspection she learns which of the children are most likely to come from homes needing supervision. In this way a considerable amount of time in house to house visitation is saved, and a short cut to the dirty home is found by means of the school.

The medical inspection has brought to light large numbers of instances of child neglect, in some of which police court proceedings have been initiated; valuable information also has been obtained as to the efficiency of vaccination in different localities, and it is disquieting to observe that in some districts there appears to be a growing neglect of vaccination, as evidenced by the fact that the younger children show a less satisfactory vaccination than the older ones.

Neglect of Vaccination.

It appears that over the whole City the percentage of unvaccinated boys and girls leaving school is 4·5, but in the new admissions of children to the schools it is 7·8 per cent., an addition which cannot be

regarded without grave apprehension as to the results of exposure to smallpox. In one Poor-law district nearly 14 per cent. of the newly admitted children are unvaccinated—a serious state of affairs.

A further incidental advantage reaped from the medical inspection is shown in the results of the conversations which the School Medical Inspectors have with the parents, in the course of which some useful information from a hygienic point of view is inculcated and subsequently acted upon.

Verminous School Children.

References will be found to the value of medical inspection of children in lessening the suffering of neglected children from vermin. The subject has proved a difficult one, and further facilities will have to be provided before this serious evil can be efficiently dealt with, whether in the case of school-children or of others not attending school.

While it is apparent that a large number of parents have paid little or no attention to the recommendations to seek medical or dental advice for their children, the number of scholars who have been satisfactorily treated is distinctly encouraging, and lends weight to the view that in future more regard will be paid to such recommendations. The moral effect of recent prosecutions under Section 12 of the Children Act, 1908, has undoubtedly accelerated the provision of suitable treatment in many instances.

Child Neglect

As a result of following to their homes very neglected children, who unfortunately are still so frequently to be seen about the streets, the Female Staff in many instances have been enabled to deal effectively with this form of neglect, which almost invariably is associated with the drunkenness of the mother.

During the year a very large share, indeed the greater part, of the time of the Female Inspectors has been taken up with sanitary work associated directly or indirectly with school children. So far as it has gone, the work has been good and effective, but it is very far from meeting the pressing necessities of the case, and it is absolutely necessary, in order to efficiently cope with it, that more suitable bathing establishments should be available.

The Health Committee and the City Council approved of an application being made to Parliament in the Liverpool Corporation (General Powers)

Bill of 1908, for powers to deal with verminous and neglected children, as well as school children, coming within that category. The Parliamentary Committee, however, declined to give the powers.

It was pointed out that the child at home may be and is a source of infection to the child that goes to school.

The Chairman of the Committee at the time observed that "there is no precedent for such a proposal to give powers to go into people's homes to deal with children at a time when the State had taken no responsibility for the child. Directly the child became of school age and went to school the State took a certain responsibility with regard to the child, and the child was placed in a somewhat different position with regard to the State." It was pointed out to the Committee that both classes of children are equally children of the State, and equally deserving of protection.

The whole subject is very fully dealt with in the Medical Officer's Report to the Education Authority, and it is not necessary therefore to allude further to it here.

With a view to making special enquiries for the Home Secretary regarding Infantile Mortality, 130 homes were visited, and in 60 cases it was found that the mothers went out regularly to work. (Page 123.)

Old Age Pensions.

Old persons, too feeble or unfit to take care of themselves, or suffering from some chronic complaint, have been persuaded to go into hospital, and it frequently occurs that the Inspector is successful where relatives and others have failed. The Old Age Pensions have greatly benefited many old people, making them independent of their relations, who have on that account become more interested in their welfare.

Growth of the Suburbs.

The Building Surveyor reports a further increase of 1,801 houses under £25 rental during the year. Approximately 8,000 houses of this rental have been erected in the suburbs during the last five years.

During the ordinary course of house-to-house inspection of property in the suburban areas of Toxteth, Walton, Wavertree and West Derby, inquiries have been made of the occupiers of 1,285 houses which have been erected during the past three years. It was found that 1,036

families had removed from dwelling-houses in the older and more congested parts of the City, being attracted apparently by the more open localities and by such circumstances as the provision of baths. In 136 instances the occupiers were newly married couples commencing house-keeping. The tenants of 113 houses came from districts without the City area, many from the Cheshire side. The rental of the houses visited varies from 6s. to 9s. weekly. (Page 250.)

Where the occupants come from.

It is gratifying to record a further decline in deaths from excessive drinking. Facing page 76 will be seen a chart showing the number of deaths certified from alcoholism during each of the last ten years, and of inquests in which juries have returned verdicts that death was due to this cause, and it will be seen that last year the deaths of males were less than half the number that they were ten years ago, whilst the deaths of females are less than one-third. The chart does not take cognizance of deaths ascribed to delirium tremens, cirrhosis, fatal accidents to drunken persons, manslaughter in which either the person assaulted or the assailant, or both, were under the influence of drink, nor of suicide whilst under the influence of drink; generally speaking, these bear a proportion to the ordinary inquest cases. (Page 75.)

Decline in Deaths from Drinking.

It has already been pointed out in previous Reports that the chief adverse influence upon the public health of excessive drinking is indirect; it is reflected in high infant mortality, neglect of, and cruelty to children; the waste in drink of money which ought to be spent on the necessaries of life is, apart from actual drunkenness, a prolific source of injury to the public health, accentuating poverty and the miseries and suffering which follow in its train.

The Housing Committee and the City Council have given expression to their views as to the prejudicial effects of so many licensed premises in the poverty stricken and squalid areas dealt with by the Housing Committee. There was no dissentient in the City Council to the views which the resolution expressed, but if any person should doubt the accuracy of the conclusions of the City Council on the subject, such doubt would very readily be set at rest by taking note in any district where public-houses are excessive and unnecessary, of the condition of the squalid, dishevelled women who leave the public-houses, and he will receive further enlightenment if he notes in the case of one or two, or more if he wishes, what sort of homes they go to, what is the condition

of the home, and what the condition of the children. He will then be perfectly satisfied that the evils of intemperance are not limited to the person consuming the liquor.

Drink and Housing Operations.

Whilst a considerable number of licenses have been removed and compensation paid by Magisterial Authority, the Housing Committee themselves have also expended large sums in buying out some of these premises, with encouraging results. The map following page 258 indicates the position in regard to these matters, whilst the photographs facing page 258 show fairly well the character of the insanitary dwellings with which the Housing Committee deal.

Money ill-spent.

At two alone of the licensed houses purchased by the Housing Committee, and one of which is shown in the photograph, from £35 to £40 per week was spent on drink in each; in view of the extreme poverty of the neighbourhood, this amount would be more usefully spent in food and clothing. It is in the interests of the public health that the places should be closed, notwithstanding the claim of the owners that "they were situated perhaps in the best neighbourhood for the public-house trade to be found in all Liverpool," and occupy "a particularly commanding position, and the people were of the right sort, from the publican's point of view as customers," circumstances which no doubt explain the comparatively large amount which the Housing Committee were called upon to pay. But it is felt that the interests of the public health are paramount, and an improvement in the vicinity will follow, as in previous purchases of property of this kind, commensurate with the large cost involved. There are still 32 licensed premises remaining within 200 yards of the area.

House Fly and disease.

With a view to checking the breeding of flies, particular attention has been paid to stable middens, which are sprayed with lime at certain intervals. In previous reports accounts have been given of the habits of the house-fly, which sufficiently explain the danger which may arise from the transmission by this insect of filth and infection to foodstuffs. (Page 116.)

Unnecessary Noises.

The nuisance and injury to health caused by unnecessary noises at night, usually by the keeping of animals, such as dogs chained up in the cold weather, causing them to howl through a winter night, gives cause for serious complaint on the part of sick people. Other noises, such as that caused by the keeping of crowing cocks, are similarly

disturbing. Proposals have been made to procure by-laws to enable the Court to deal with nuisances of this kind, which can be proved to the satisfaction of the Court to be injurious to health.

Midwives Act, 1902.

Arrangements by which the Council have agreed to pay a fee to any medical man called in in emergency under the Midwives Act has worked well. A proposal to transfer the obligation from the Sanitary Authority to the Poor Law Authority would result in pauperising the unfortunate woman whose confinement was attended with such danger as to necessitate the presence of a medical man. (Page 139.)

Free Shelters.

The opening in the winter months of what are known as Free Shelters are calculated to do mischief. Lodgers are attracted away from the ordinary houses, and placed under conditions wholly unsuitable, with insufficient sanitary conveniences, water supply, &c. (Page 95.)

Women's Common Lodging-houses.

Considerable attention was again paid during the year to the proposal that the Corporation should provide an additional Common Lodging-house for women. Various deputations waited upon the Housing Committee, and reports and other information were furnished to that body.

The Housing Committee in considering the alleged necessity for themselves providing common lodging-houses for women have had the advantage of visiting a large proportion of the various descriptions of common lodging-houses already provided; they have also received deputations upon the subject, and have endeavoured to ascertain from those deputations what it is precisely that the deputation wished for in regard to the class of women to be catered for by the Corporation, the desired locality of the house, or houses, their sizes, and the prices to be charged for accommodation. The views of the members of the deputations have been conflicting, and the absence of unanimity has increased the difficulty of arriving at any conclusion upon these heads.

The deputations which have been received by the Committee included several ladies and gentlemen of considerable experience in various lines of public service, but owing to the want of precision in the views put forward, the absence of unanimity as to the class to be catered for, the numbers to be provided for, the localities of the houses, and so forth, it is impossible to make any suggestion which could meet their views, even if it were right to assume that the information upon which those

views were based is correct. Photographs of some of the Women's Lodging Houses are given. (Page 96.)

Necessity for a quinquennial census.

There is a natural tendency to compare the rates of mortality of one town with those of another, but it is necessary to remember that at a period so remote from the Census the estimate given of the populations of many of the large towns is a wholly untrustworthy basis of comparison.

The Census enumeration affords the only way of ascertaining with reasonable certainty the actual numbers of the people living in any locality, their ages, condition, sex, infirmities, and so forth. Evidence which no one disputes points conclusively to the necessity for a revision of the system by which the long interval of ten years is allowed to elapse between each Census. The annual estimates, based upon the assumption that the rate of progress maintained during the preceding inter-censal period has continued since, are for the first few years succeeding the Census correct enough for all purposes, but from the fifth or sixth year onwards the margin of error increases, and, whether the population be over-estimated or under-estimated, the results are equally obstructive to the progress of sanitation. Birth-rates, marriage-rates, death-rates, incidence of disease, and so forth, rest upon the estimated population as a basis, and if that basis is inaccurate, so the published rates are inaccurate, and to a proportionate degree, and the value of sanitary measures obscured accordingly.

Value of Statistics.

Statistical returns will always be regarded as the measure of sanitary progress, and the measure of usefulness of the sanitary operations carried out; indeed they furnish the simplest and most popular way in which the results of sanitary measures can be gauged. Accuracy in this matter is necessary.

The last Census showed that in the great majority of the County Boroughs the estimate for a few years preceding the Census had been inaccurate to an extent which tended to vitiate and to render worthless comparisons between towns, and in a large number of cases the margin of error was large enough to affect materially the published figures relating to birth-rates and death-rates.

Erroneous Returns check Sanitary progress.

One of the most interesting examples is furnished by Liverpool. In the Census of the City of Liverpool, taken in 1891, it was found that the

margin of error in the Registrar-General's estimate of the population of the City, which had been gradually expanding, had reached the enormous total of 100,000 people. This had a very practical effect upon the health of the inhabitants, the health of the City showing more favourably than was actually the case, and it was felt that there was no great urgency to proceed with the sanitary measures which common observation suggested were necessary; and, as a consequence, for a number of years there was a slacking off in measures which were needed in the interests of the health of the people. Towards the end of the last decade, namely, 1901, again an error crept in; but on this occasion the error was in the opposite direction. It was found to be an under-estimate of about 50,000 people.

What is necessary is that the enumeration of the population should take place every five years. A quinquennial Census need not include the whole of the very full information sought at the present decennial one; in fact, it is undesirable that it should; intermediate enumerations need only record the number, the sex, and the age of the population, and these limits would probably result in a more accurate return. A system of this character has been for many years adopted in France, Germany, and other European countries, also in the United States of America, and Japan, and there is not a shadow of doubt that our own obsolete system is standing in the way of sanitary advancement.

Abattoir.

The Abattoir question, one of the most important questions of sanitation which from time to time has engaged the attention of the Council, was during the year the subject of the most complete and careful investigation by a Committee appointed for the purpose.

This Committee visited numerous Abattoir establishments at home and abroad, and learned the views of numerous Associations connected with or affected by the trade.

At the close of the year the Committee had not yet definitely announced its decision, although certain general views in conformity with modern sanitary progress had been expressed.

E. W. HOPE,

Medical Officer of Health.

Public Health Department,
Municipal Offices,
Liverpool, *5th May*, 1910.

STATISTICS

RELATING TO

BIRTHS, DEATHS, AND CAUSES OF DEATH, &c.,

ZYMOTIC DISEASES AND THEIR INCIDENCE.

SUMMARY

OF

VITAL STATISTICS FOR 1909.

Area of City	**16,619**	**Acres.** (26 square miles).
Population	**760,357**	
***Density**	**45·7**	**Persons per Acre.**
***Births**	**23,591,**	**Birth-rate 31·0.**
***Deaths**	**13,945,**	**Death-rate 18·3.**
***Infantile Mortality**	**3,377**	**Deaths under one year, or 143 per 1,000 Births.**
Zymotic Death-rate (7 principal Zymotic Diseases)	**2·0**	**per 1,000.**
Phthisis Death-rate	**1·3**	**per 1,000.**

* For variations in different districts see plan-map in the Appendix.

BIRTHS.

During the fifty-two weeks of the year, terminating on Saturday, January 1st, 1910, the returns of the local registrars recorded 23,591 births within the City. Of the total births 12,116 were males and 11,475 were females. The number of illegitimate births was 833, or 3·5 per cent. of the total births.

The birth-rate in the City of Liverpool is considerably above the average of the great towns, as well as of England and Wales taken as a whole (see diagram, page 8). During 1909 the birth-rate was 31·0 per 1,000 of the population; the average of the previous five years (1904-1908) being 32·5. The rates are calculated upon the corrected population as ascertained by the Census Returns of 1891 and 1901.

The variations in the birth-rate, and the distribution of the births in the different wards and districts of the city, are indicated upon the accompanying plan-map (see Appendix), and have also been arranged in the following tables:—

BIRTHS.

Districts.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		1909.		Corrected Average Rate per 1000 during the 5 years 1904-1908.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Births.	Rate per 1000	
Scotland	277	286	247	249	245	220	225	204	1953	37·6	40·7
Exchange	162	147	154	123	138	127	154	122	1127	27·9	29·2
Abercromby	255	205	222	255	211	242	250	217	1857	37·1	33·6
Everton	600	518	518	533	523	523	515	452	4182	34·3	35·2
Kirkdale	312	281	291	269	287	228	279	266	2213	31·5	33·0
West Derby—West	351	350	344	311	322	313	337	300	2628	29·3	31·5
Toxteth	459	431	400	411	438	385	378	378	3280	31·2	32·4
Walton	285	279	299	289	278	225	230	255	2140	32·5	32·6
West Derby—East	219	216	215	208	214	191	156	199	1618	29·3	31·3
Wavertree	144	136	157	121	153	143	111	131	1096	25·2	30·6
Sefton Park	105	84	86	97	81	93	73	76	695	18·2	18·9
(late Toxteth Rural) Garston	87	106	87	82	92	83	74	77	688	27·8	33·7
Fazakerley	15	7	25	15	16	12	20	4	114	23·8	27·5
City	3271	3046	3045	2963	2998	2785	2802	2681	23591	31·0	32·5

The continued high birth-rate in the older and poorer parts of the city is a noticeable feature, being in some instances higher than in the rapidly-extending areas in the suburbs. The high birth-rate amongst the poorer classes no doubt partially results from very early marriage.

The large numbers of inmates of registered Common Lodging-houses and Model Lodging-houses explains in a measure the apparently low birth-rate in Exchange.

In the district known as Sefton Park, the large proportion of domestic employés partially accounts for the low birth-rate.

The following table shows the population, number of births, and the corrected birth-rate per 1,000 during the last twenty-five years:—

Year.	Population.	No. of Births.	Rate per 1,000.
1885	537,548	19,464	36·2
1886	534,088	19,559	36·6
1887	530,649	18,414	34·7
1888	527,233	17,777	33·7
1889	523,838	17,676	33·7
1890	520,466	17,592	33·8
1891	518,302	17,832	34·4
1892	519,590	17,758	34·2
1893	520,882	18,328	35·2
1894	522,178	17,893	34·3
*1895	652,523	22,006	33·7
1896	658,050	21,943	33·3
1897	663,633	22,280	33·6
1898	669,243	22,227	33·2
1899	674,912	22,488	33·3
1900	680,628	22,762	33·4
1901	686,332	21,980	32·0
** 1902	710,337	24,283	34·2
1903	716,810	23,910	33·3
1904	723,430	24,278	33·5
*** 1905	733,714	24,350	33·2
1906	739,180	24,123	32·6
1907	746,144	23,654	31·7
1908	753,203	23,891	31·7
1909	760,357	23,591	31·0

The foregoing table shows the decrease in the birth-rate during the last 25 years. This decrease has, however, been even more pronounced in other parts of the country, and notwithstanding the decline in Liverpool, the birth-rate in this city is still amongst the highest, being exceeded by only two towns having a population of more than 100,000.

* City area extended. ** Garston included. *** Fazakerley included.

The following table shows the *natural* increase or decrease of population, that is, the increase or decrease in the number of births as compared with the number of deaths during the year 1909, in the several districts of the city. In only one district, viz., Exchange, is any decrease shown; the nett result in the city showing an increase of births over deaths of 9,646.

Districts.	Population.	Births.	Deaths.	Number of Births over Deaths.	Number of Deaths over Births.
Scotland	51,908	1,953	1,441	512	—
Exchange	40,288	1,127	1,251	—	124
Abercromby	49,982	1,857	910	947	—
Everton	121,610	4,182	2,555	1,627	—
Kirkdale	70,182	2,213	1,341	872	—
West Derby—West	89,633	2,628	1,591	1,037	-
Toxteth	104,877	3,280	1,908	1,372	—
Walton	65,828	2,140	882	1,258	—
West Derby—East	55,064	1,618	877	741	—
Wavertree	43,411	1,096	436	660	—
Sefton Park	38,048	695	406	289	—
(late Toxteth Rural) Garston	24,748	688	289	399	—
Fazakerley	4,778	114	58	56	—
City	760,357	23,591	13,945	9,646	—
Deaths of persons brought into Hospitals, Workhouses, Nursing Homes, &c., from outside the City	—	—	816	—	—
Total ...	760,357	23,591	14,761	—	—

The following tables give the estimated population, number of births recorded, and birth-rate of eighty-two of the large towns of the United Kingdom.

TOWNS.	Estimated Population in the middle of the year 1909.	No. of Births.	Annual Rate to 1,000 of population.
London	4,833,938	116,559	24·2
Croydon	161,078	3,915	24·4
Willesden	160,424	4,039	25·2
Hornsey	95,628	1,456	15·3
Tottenham	129,464	3,792	29·4
West Ham	321,761	8,744	27·2
East Ham	149,575	3,520	23·6
Leyton	129,614	3,116	24·1
Walthamstow	136,602	3,291	24·2
Hastings	68,165	1,028	15·1
Brighton	130,926	2,675	20·5
Portsmouth	214,726	5,820	27·2
Bournemouth	72,368	1,205	16·7
Southampton	124,667	2,938	23·6
Reading	82,995	1,733	20·9
Northampton	97,752	1,957	20·1
Ipswich	74,889	1,795	24·0
Great Yarmouth	53,430	1,356	25·4
Norwich	124,136	3,004	24·3
Plymouth	124,180	2,772	22·4
Devonport	83,103	2,163	26·1
Bristol	377,642	8,503	22·6
Hanley	68,831	2,139	31·2
Burton-on-Trent	54,453	1,203	22·2
Wolverhampton	104,633	2,484	23·8
Walsall	99,399	2,773	28·0
Handsworth	70,186	1,437	20·5
West Bromwich	70,457	2,134	30·4
Birmingham	563,629	14,977	26·6
King's Norton	81,632	1,868	22·9
Smethwick	70,377	1,989	28·3
Aston Manor...	85,257	2,016	23·7
Coventry	80,163	2,601	32·5
Leicester	244,255	5,343	21·9
Grimsby	73,036	2,194	30·1
Nottingham	263,443	6,745	25·7
Derby	129,411	3,213	24·9
Stockport	103,706	2,729	26·4
Birkenhead	121,123	3,732	30·9
Wallasey	71,004	1,824	25·8

TOWNS.	Estimated Population in the middle of the year 1909.	No. of Births.	Annual Rate to 1,000 of population.
Bootle	69,393	2,115	30·6
St. Helens	95,161	3,050	32·1
Wigan	90,678	2,852	31·5
Warrington	72,276	2,257	31·3
Bolton	187,824	4,634	24·7
Bury	59,234	1,227	20·8
Manchester	655,435	18,197	27·8
Salford	241,950	6,724	27·9
Oldham	143,301	3,912	27·4
Rochdale	89,653	2,034	22·7
Burnley	106,267	2,660	25·1
Blackburn	136,959	3,128	22·9
Preston	118,519	3,034	25·7
Barrow-in-Furness	62,996	1,641	26·1
Huddersfield	94,739	2,318	24·5
Halifax	111,911	1,840	16·5
Bradford	293,983	5,507	18·8
Leeds	484,012	11,004	22·8
Sheffield	470,958	13,236	28·2
Rotherham	65,070	2,048	31·6
York	87,004	2,069	23·8
Hull	275,552	8,077	29·4
Middlesbrough	105,255	3,344	31·9
Stockton-on-Tees	53,417	1,411	26·5
West Hartlepool	79,686	1,906	24·0
Sunderland	159,378	4,659	29·3
South Shields	117,627	3,397	29·0
Gateshead	131,024	3,755	28·7
Newcastle-on-Tyne	281,584	7,677	27·3
Tynemouth	55,808	1,867	33·5
Newport, Mon.	78,336	2,480	31·7
Cardiff	195,303	5,025	25·8
Rhondda	135,894	5,577	41·2
Merthyr Tydfil	78,365	2,787	35·7
Swansea	98,308	3,235	33·0
Edinburgh	355,366	7,410	20·9
Glasgow	872,021	23,140	26·5
Dundee	169,409	4,628	27·3
Aberdeen	181,918	4,490	24·7
Dublin	398,356	11,407	28·7
Belfast	386,576	10,900	28·3
LIVERPOOL	**760,357**	**23,591**	**31·0**

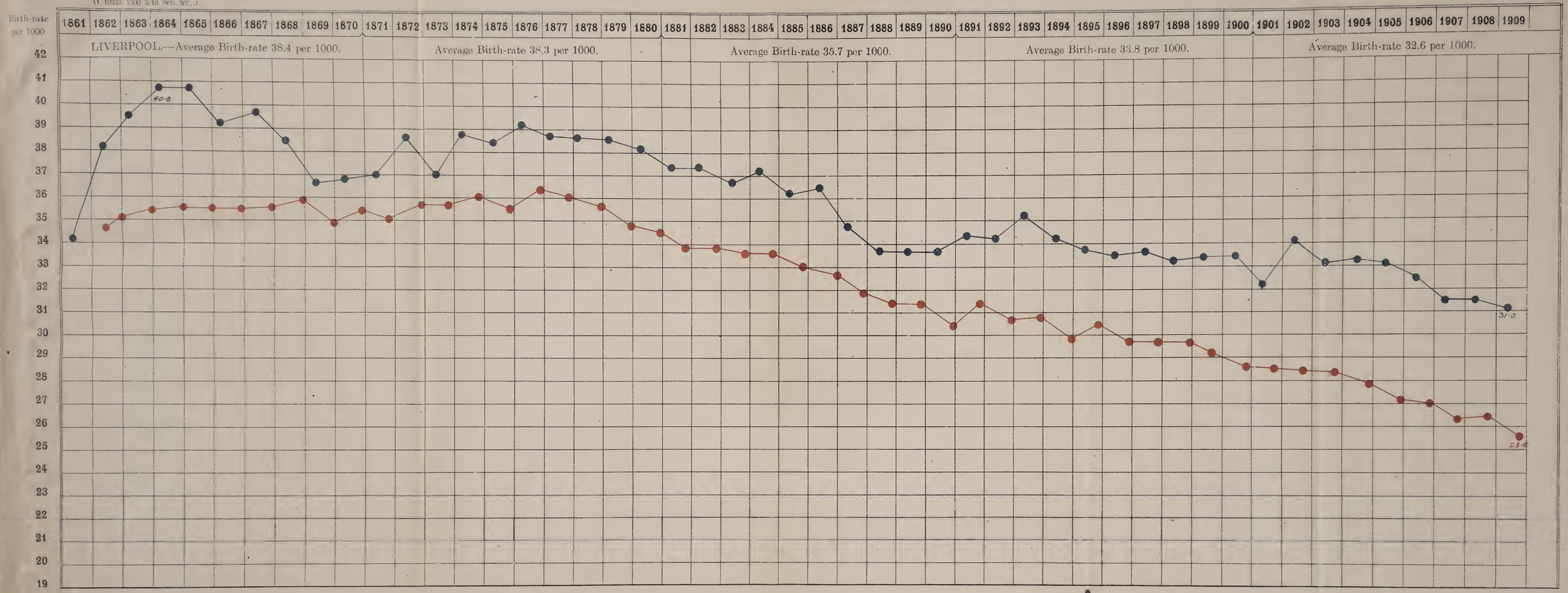
The above table is, with the exception of Liverpool, taken without correction from the Returns of the Registrar-General of England and the Registrar-General of Scotland.

BIRTH RATE, 1861-1909.

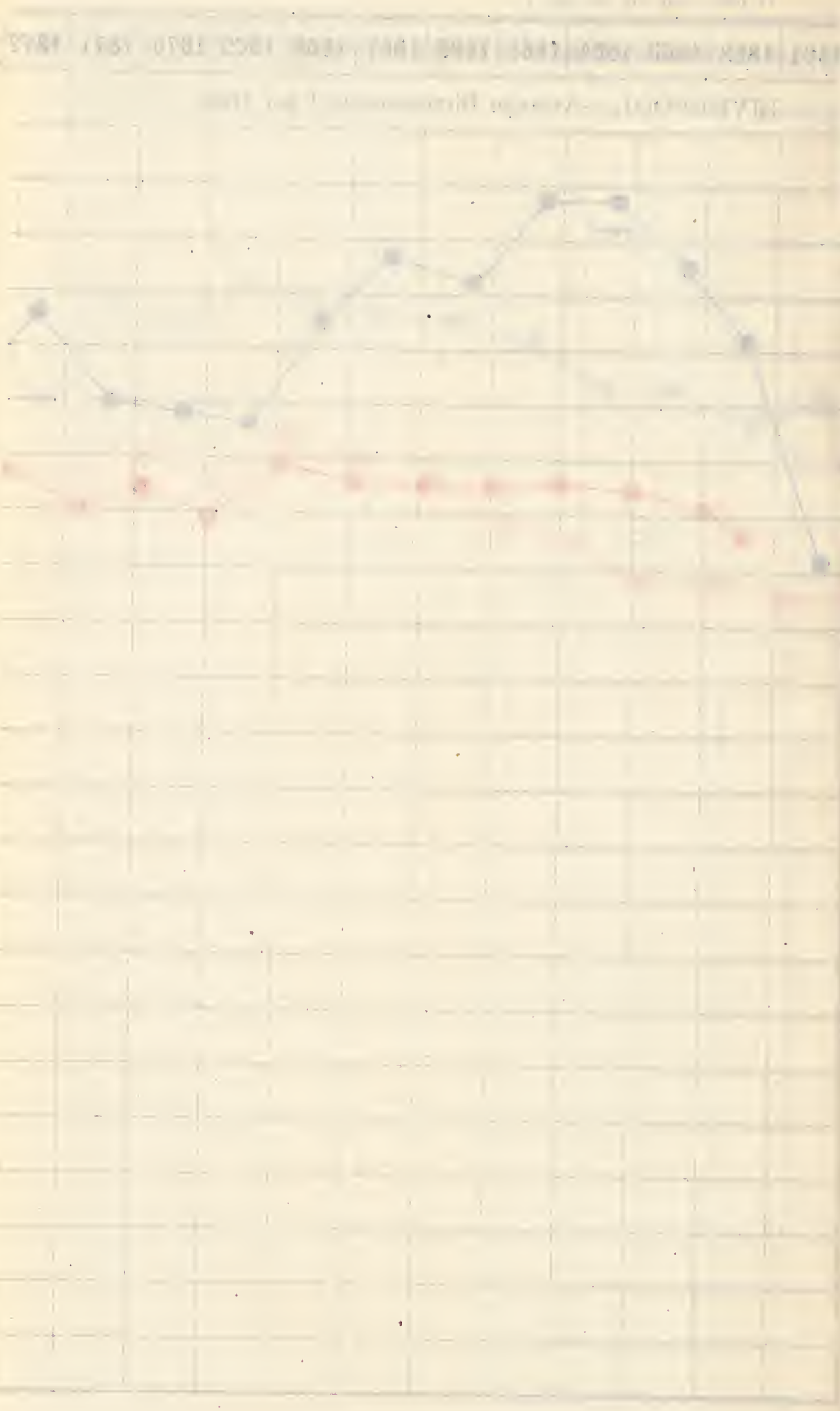
The BLUE line denotes the Birth Rate of Liverpool.

The RED line „ „ „ „ „ England and Wales.

O. 19335. 1500. 5/10. Sch. 307...L.



* City Area Extended.



O.19282. 1500. 4/10. Sch. 307.B.

CITY OF LIVERPOOL. DEATH RATE, 1861-1909.

Death-rate per 1000.

The figures indicating the rates have been corrected upon the various Census Returns.

Average Death-rate 32.5 per 1000. | Average Death-rate 28.5 per 1000. | Average Death-rate 26.1 per 1000. | Average Death-rate 23.9 per 1000. | Average Death-rate 19.9 per 1000.

1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
29·0	30·4	33·0	36·0	36·3	41·7	29·4	28·9	28·5	31·0	35·1	27·0	25·8	31·9	27·3	27·3	26·4	29·3	26·8	27·2	26·6	27·1	27·7	26·3	25·6	26·0	26·3	23·1	24·4	27·6	26·8	24·4	26·7	23·1	24·8	21·4	22·8	22·2	24·1	23·1	21·6	21·6	19·9	21·9	19·2	20·2	18·3	18·6	18·3

Deaths

Typhus Fever.... 730

Typhus Fever... 1,304

Typhus Fever... 1,774

Typhus Fever... 2,338

Typhus Fever... 1,593
Cholera 1,788

Typhus Fever..... 656

Typhus Fever..... 475

Scarlatina 1,040
Typhus Fever..... 475

Scarlatina..... 1,278
Relapsing Fever 355
Typhus " 218

Smallpox 1,019
Typhus Fever..... 922

Typhus Fever ...194

Typhus Fever....113

Scarlatina 1,011
Typhus Fever.....772

Typhus Fever.....973

Smallpox 936
Typhus Fever.....334

Smallpox 999
Typhus Fever.....303

Typhus Fever.....155
Measles 444
Scarlatina 947

Typhus Fever 91
Scarlatina 734
Measles 455

Typhus Fever..... 67
Scarlatina 463
Diarrhœa 1,023

Typhus Fever.....143
Smallpox 313
Scarlatina 435

Typhus Fever.... 385

Typhus Fever.....408

Smallpox 106

Smallpox 45

Measles 661
Lung Diseases..4,580 ●

Scarlatina 577
Lung Diseases..4,825 ●

Influenza 247
Lung Diseases..5,065 ●

Diarrhœa 866
Lung Diseases. 4,515 ●

City Area extended.
Diarrhœa 1,108
Influenza 161
Lung Diseases. 6,517 ●

Diarrhœa 1,462

Diarrhœa 1,156
Influenza 903
Lung Diseases. 7,141 ●

Diarrhœa 1,369

City Area extended.

Diarrhœa 1,785
Measles 690

Diarrhœa 1,258
Measles 585
Whooping Cough 362

● Including Phthisis.

Average Death rate 32.5 per 1000
1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
32.4
28.3
29.2
34.7

DEATHS.

The statistics dealing with mortality and its causes are set forth in the ensuing pages; the total death-rate of the city during the year was 18·3 per 1,000; the average rate of the ten years following the extension of the city boundaries (1896-1905) was 21·8, and that of the last four years 1906-9 was 18·8. The deaths in public institutions, nursing homes &c., of 816 non-residents, equal to 1·0 per 1,000, have been eliminated from the total deaths.

On comparing the death-rate of one locality with that of another, it is necessary, before any correct conclusions can be drawn from the comparison, to ascertain whether the populations of the two localities are comparable in point of age; if they are not, certain corrections must be made. Quite apart from conditions of sanitation, mortality varies widely at different age-periods, as the next table shows; consequently the death-rate of the community is largely influenced by the proportions living at each age-period; the effect of a high birth-rate in raising the crude death-rate is well seen by the table, which also indicates plainly enough how the crude returns are modified if there happens to be an unusual proportion of the population at any one age-period. A hospital for foundlings, or a home for aged people, will have a very different influence upon the mortality returns of the district than a school containing an equal number of boys from 10 to 15 years of age.

If, for example, we could conceive that the whole population of Liverpool consisted of persons between the ages of 20 and 30, the death-rate last year would have been 4·1 per 1,000; if, on the other hand, we could conceive that it consisted entirely of people above 60 years, the death-rate would be 76·7 per 1,000. It is plain that any variation in the *proportions* living at the respective age-periods would affect the death-rate, and this with absolutely no change whatever in the condition of municipal sanitation. These proportions, however, vary very slowly and very slightly year by year in each district, so that yearly comparisons of the mortality-rate of the same district may be fairly made, but one district must not be put into comparison with another unless the conditions of each are known, and the necessary corrections made.

It is also necessary to remember that at a period so remote from the Census the estimate given of the populations of many of the large towns is a wholly untrustworthy basis of comparison.

THE FOLLOWING TABLE SHOWS THE ANNUAL RATE OF MORTALITY PER 1,000 AT EACH OF TWELVE AGE-PERIODS DURING LAST YEAR IN LIVERPOOL, AS WELL AS THE TOTAL NUMBER OF DEATHS.

THE DIFFERENCES WHICH THE FIGURES SHOW ARE VERY STRIKING:—

1909.	* Under 1 year.	1 to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 and upwards.	Total at all Ages.
Rate of Mortality per 1,000 living at ages indicated.	143·1	69·1	18·2	4·9	2·8	4·1	7·9	14·2	28·4	54·3	117·5	182·0	18·3
Total Number of Deaths at each Age Period.	3377	1269	974	405	425	610	872	1133	1491	1673	1313	403	13945
†Estimated Population	21186	18357	53460	81955	151570	147534	109937	79677	52488	30810	11169	2214	760357

(See Comparative Chart on next page).

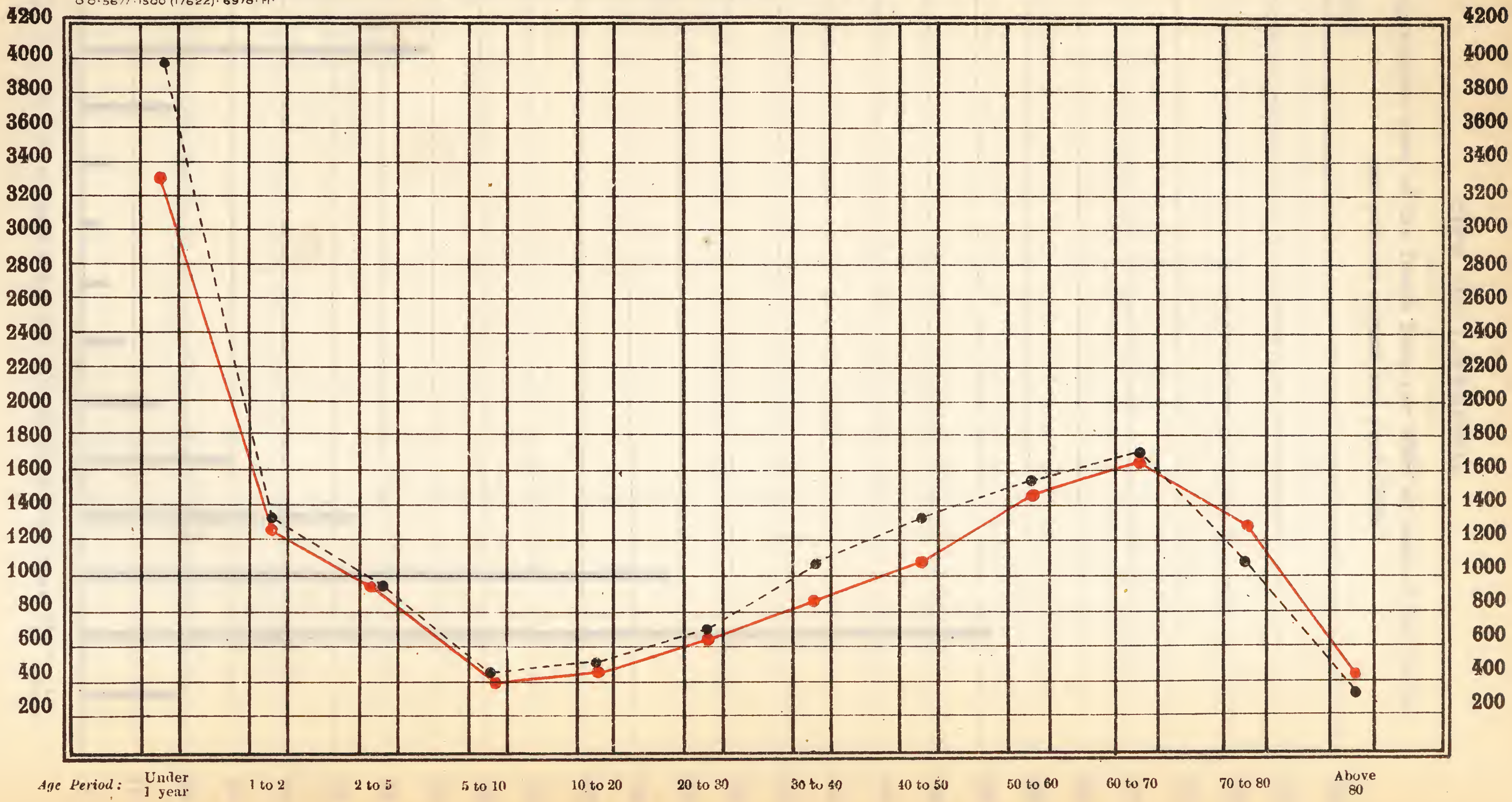
* Column I. indicates the rate of mortality under one year per 1,000 births during the year.

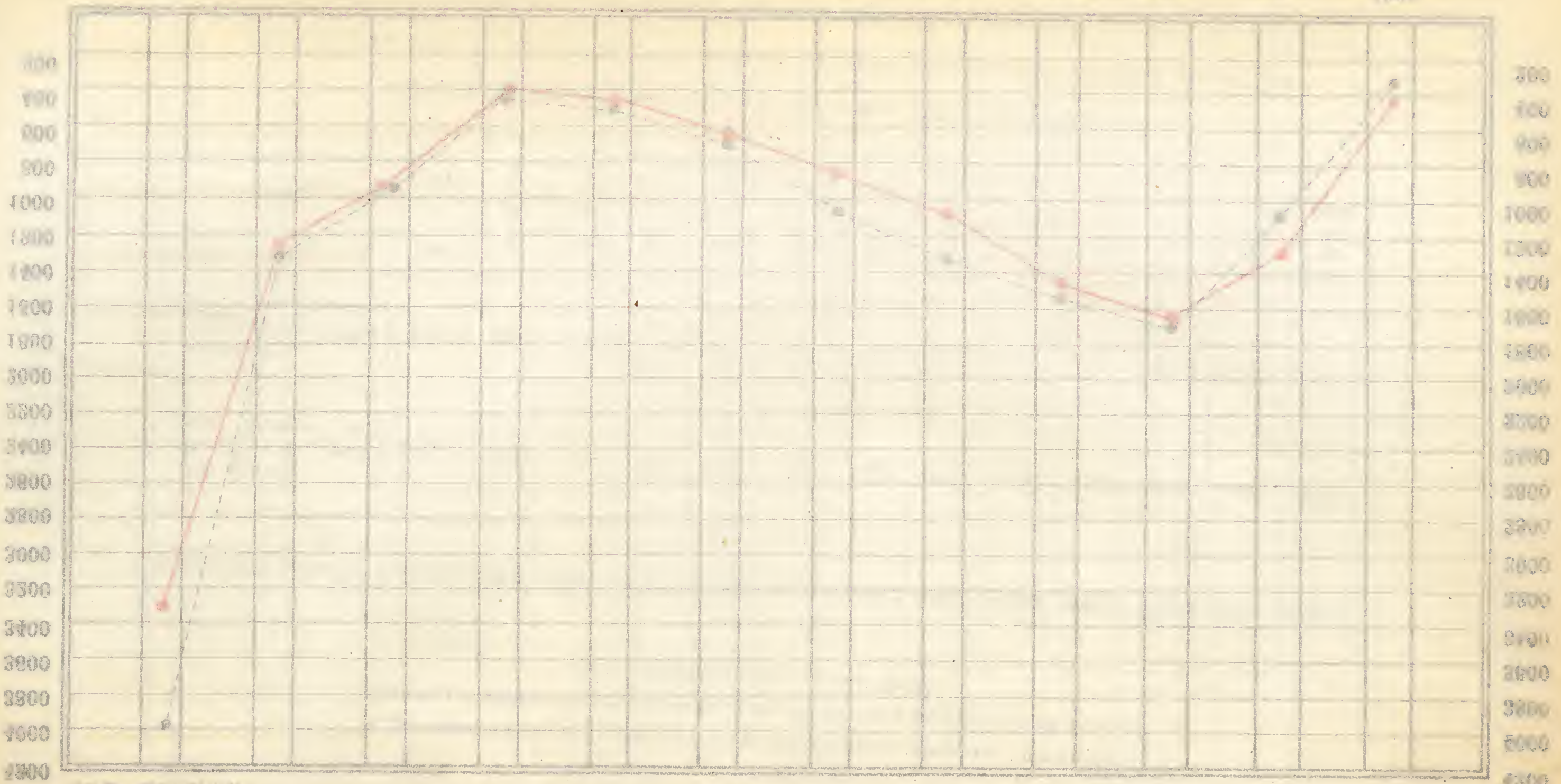
† This estimate being so far removed from the Census must be regarded as approximate.

CITY OF LIVERPOOL.

Comparative view of the total number of Deaths at twelve different age periods during the year 1909 shown in Red, the average for the preceding Ten years (1899-1908), being shown in the Black dotted line.

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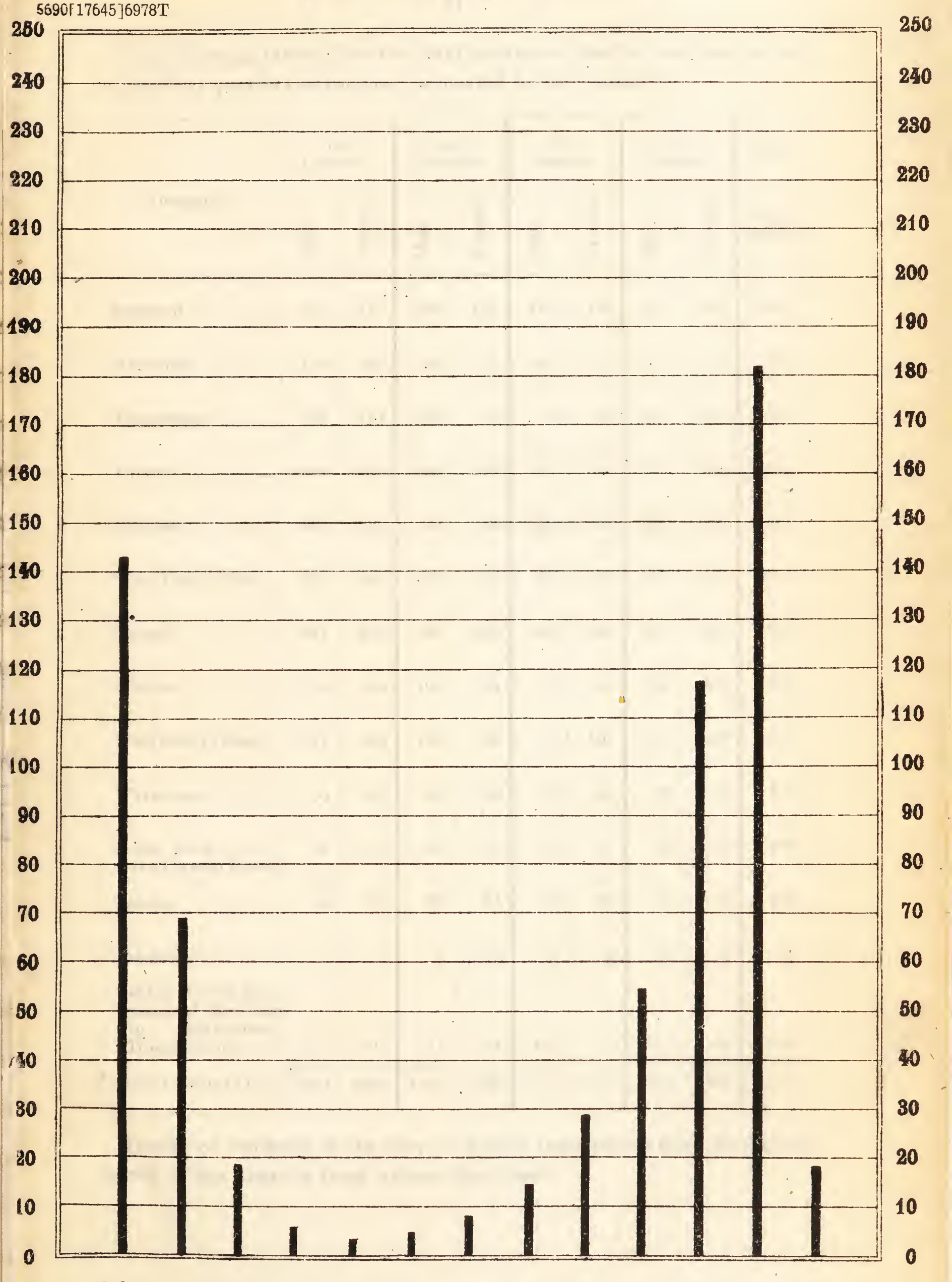




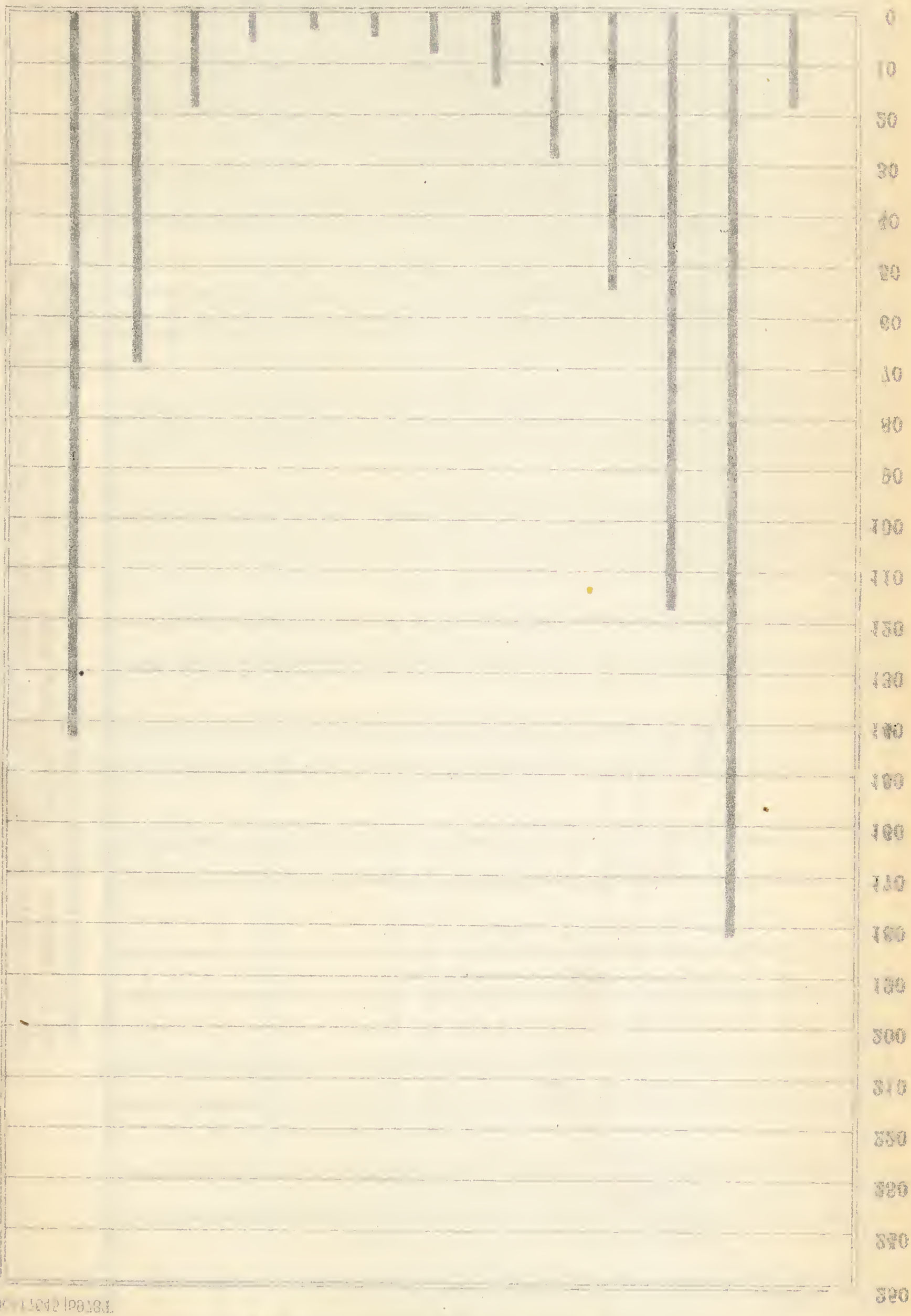
CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1000 at each of the twelve age periods during the year 1909.

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tge period :



CITY OF HADDROOT.

Comparative view of the Death Rate per 1000 at each of the twelve
age periods during the year 1908.

The following tables gives the total number of deaths occurring in each of the four quarters of the year, allocated to each district:—

Districts.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Year.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total Deaths.
Scotland	213	215	168	157	186	150	191	161	1441
Exchange	198	165	186	137	146	121	155	143	1251
Abercromby	139	142	127	87	93	93	121	108	910
Everton	412	372	342	296	274	253	313	293	2555
Kirkdale	207	213	147	129	192	142	163	148	1341
West Derby (West)..	238	264	207	160	199	132	214	177	1591
Toxteth	291	293	224	240	234	183	240	203	1908
Walton.....	156	140	101	103	81	85	109	107	882
West Derby (East)...	114	140	101	98	97	101	117	109	877
Wavertree	55	62	43	50	35	45	70	76	436
Sefton Park ..... (late Toxteth Rural)	68	67	48	57	31	43	55	37	406
Garston	42	32	36	31	28	32	40	48	289
Fazakerley	5	8	4	10	7	6	9	9	58
Deaths of Non-Residents of the City in Workhouses, Hospitals, &c.....	161	91	111	84	105	75	113	76	816
Total Deaths in City	2299	2204	1845	1639	1708	1461	1910	1695	14,761

Deaths of residents of the City in Public Institutions have been transferred to the districts from whence they came.

DEATHS IN PUBLIC INSTITUTIONS

Deaths in Public Institutions are referred to the Districts from whence the patients came, but the following table shows that the deaths of 5,388 persons occurred in the undermentioned Institutions for the treatment of the sick :—

	Total Deaths.	Non-Residents of City.
Parish Workhouse	1060	54
Royal Infirmary	319	98
Children's Infirmary	219	21
Maternity Hospital	27	6
Consumption Hospital	6	4
Hahnemann Hospital	12	2
Samaritan Hospital	5	—
Eye and Ear Infirmary	4	2
David Lewis Northern Hospital	221	52
Stanley Hospital	142	34
Royal Southern Hospital	204	35
Mill Road Infirmary	779	77
Hospital for Women	33	17
City Hospital North	73	4
Do. South	43	5
Do. Parkhill	70	2
Do. East, Mill Lane	95	—
Do. Fazakerley	173	7
Walton Workhouse	906	186
Belmont Road Workhouse	179	61
Highfield Infirmary	203	17
St. Joseph's Home	37	10
Toxteth Workhouse	414	19
Home for Incurables	4	2
Olive Mount Home	8	3
House of Providence	8	4
Tuebrook Villa Asylum	9	6
Turner Memorial Home	10	4
St. Augustine's Home	16	10
Kirkdale Home	57	2
Walton Gaol	9	7
Garston Accident Hospital	5	1
Deysbrook Hospital	5	—
Other Institutions	33	27
	5,388	779

From the returns made as to the residences of these persons, 4,609 of the deaths in these establishments are classified in the districts from whence the patients were removed, viz. :—561 under Scotland district,

646 under Exchange district, 363 under Abercromby district, 868 under Everton, 390 under Kirkdale, 538 under West Derby (West), 625 under Toxteth, 226 under Walton, 156 under West Derby (East), 94 under Wavertree, 58 under Sefton Park (late Toxteth Rural), 73 under Garston and 11 under Fazakerley; 628 were non-residents, who had sought relief in Liverpool Institutions, and of the remainder 151 were waifs, strangers to the city, whose previous residences were unknown.

In Liverpool the proportion of deaths which takes place in Public Institutions is larger than is the case in other towns, and the fact is an interesting one, as something may be learned of the social conditions of a locality when so large a proportion in times of sickness seek refuge in public institutions, more especially in the workhouses. Generally it implies poverty and want; but on the other hand, it may also, and no doubt does, imply that the institutions have a wide reputation, and attract sufferers to them not only from within the city, but from a distance. Probably both of these conditions exercise influence; but be that as it may, the fact remains that there is no provincial city in which so large a proportion of the deaths takes place in workhouses and hospitals.

The following table shows the percentage of deaths which have occurred in public institutions during the five years, 1905-1909, in the great towns of Birmingham, Leeds, Manchester and Liverpool:—

	1905.	1906.	1907.	1908.	1909.	Average.
Birmingham	22·2	21·8	24·6	26·0	24·8	23·9
Leeds	15·0	15·0	17·4	17·2	19·7	16·9
Manchester	23·2	24·6	26·0	26·3	29·1	25·8
Liverpool	33·0	31·6	34·5	36·2	36·5	34·3

The results of the allocation of deaths in public institutions to the districts from whence the patients had been removed, and the addition of these to the number of deaths of residents in those various districts,

are shown in the following table, from which a calculated rate of mortality per 1,000 per annum of the inhabitants has been made. The rates are calculated upon the corrected population as ascertained by the Census Returns of 1891 and 1901.

Districts.	Population.	1909.		Corrected Average Rate per 1000 during the five years 1904-1908.
		Deaths.	Rate per 1000	
Scotland	51,908	1,441	27·7	30·3
Exchange	40,288	1,251	31·0	31·4
Abercromby	49,982	910	18·2	19·4
Everton	121,610	2,555	21·0	21·3
Kirkdale	70,182	1,341	19·1	19·9
West Derby (West)	89,633	1,591	17·7	17·6
Toxteth	104,877	1,908	18·1	19·8
Walton	65,828	882	13·3	14·5
West Derby (East)	55,064	877	15·9	16·5
Wavertree	43,411	436	10·0	13·3
Sefton Park (late Toxteth Rural)	38,048	406	10·6	10·1
Garston	24,748	289	11·6	16·2
Fazakerley	4,778	58	12·1	11·4
City	760,357	13,945	18·3	19·6

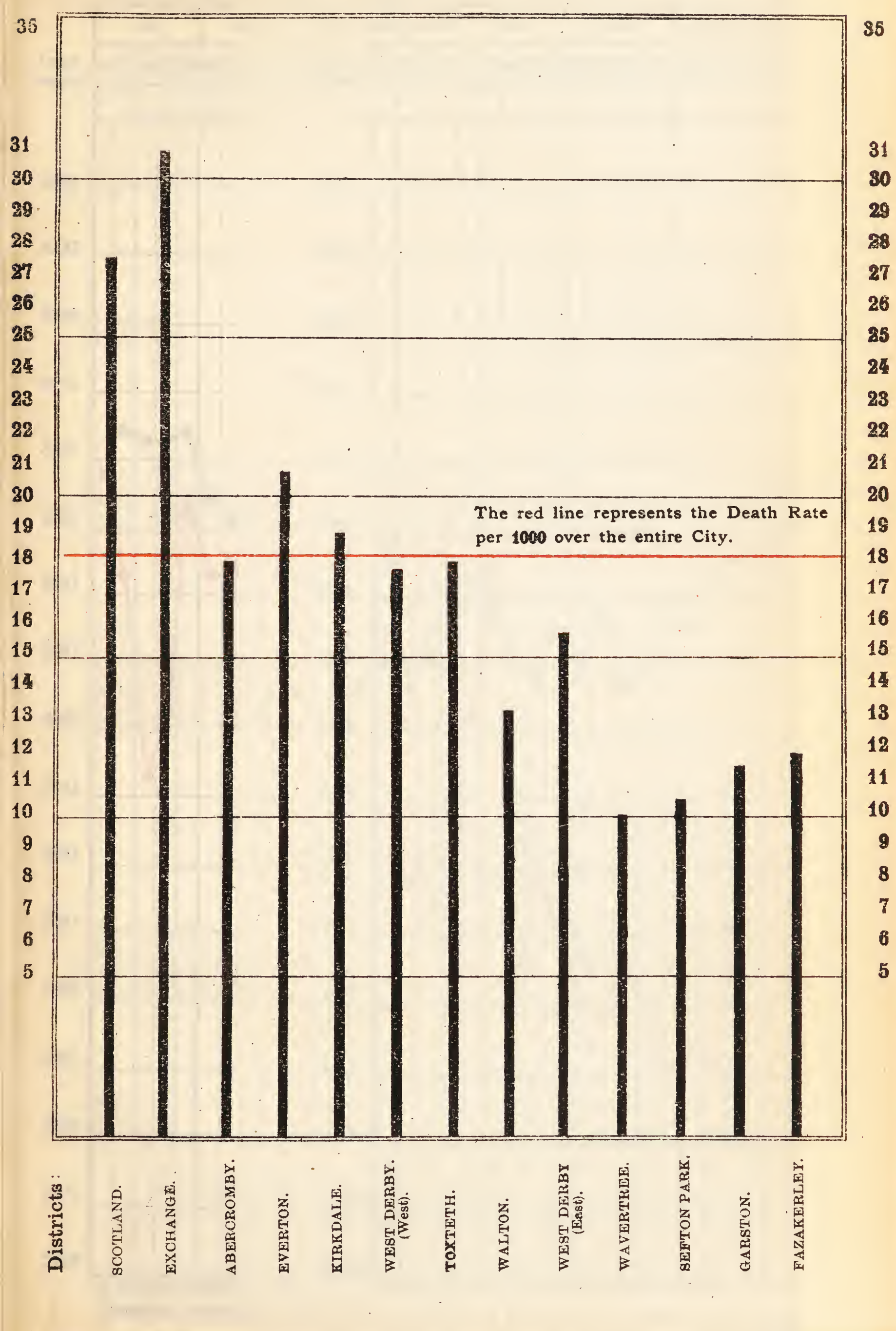
The District Registrars' Returns show that there were 32 deaths (24 of women and 8 of men) at the age of 90 and upwards, viz., 1 male and 8 females at 90, 1 male and 6 females at 91, 2 males and 5 females at 92, 2 males and 2 females at 93, 1 male and 3 females at 94, and 1 male at 98.

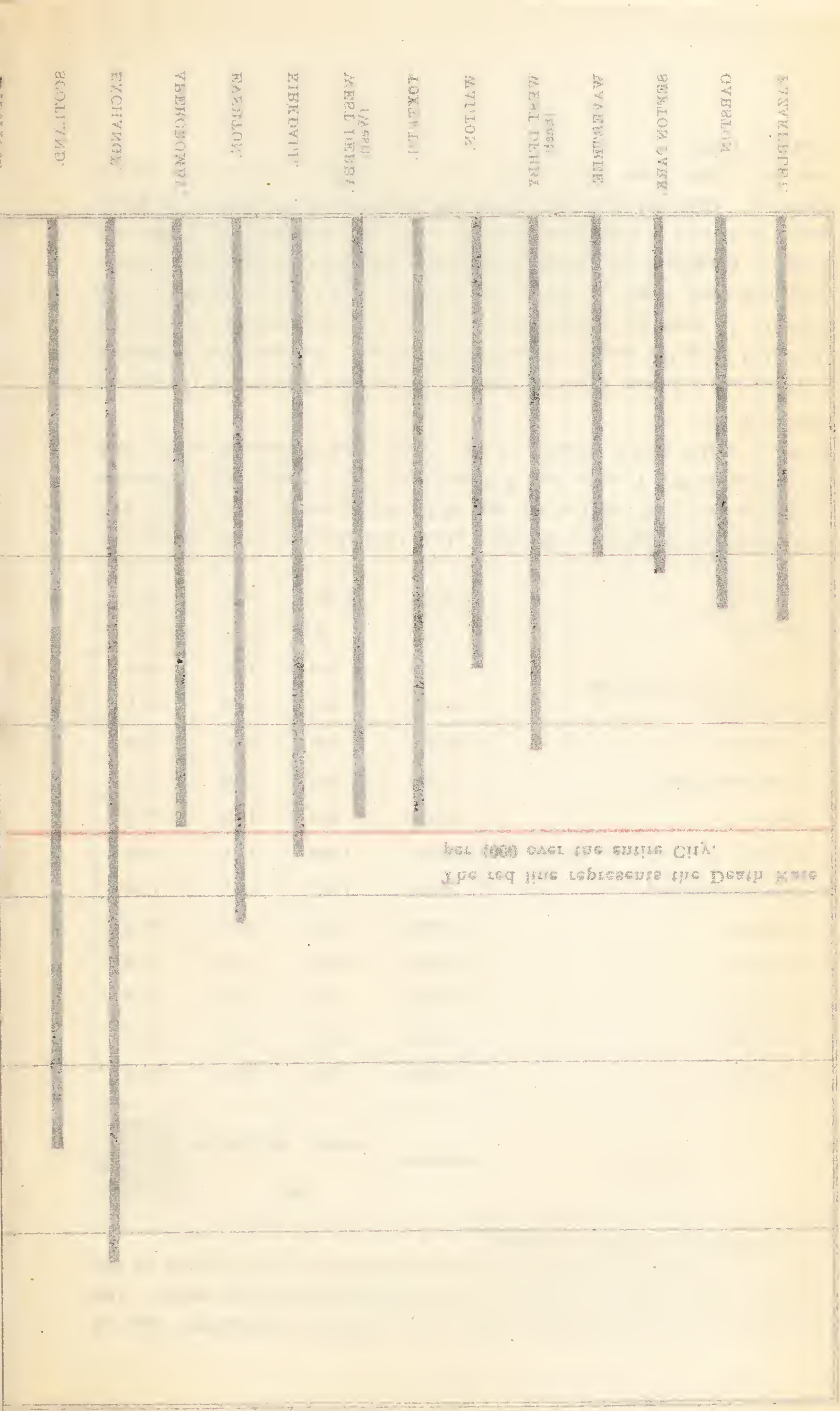
The death-rate per 1,000 for 1909 in each of the districts of the city is indicated upon the map at the end of the volume. Scotland and Exchange districts, it must be remembered, contain a great number of common lodging-houses, some of which are resorted to by non-residents of the districts, persons of very migratory habits, and often indigent and broken down in health. This class tends to swell the mortality of these two districts. Last year the rate in Scotland district was increased by about one per 1,000 from this cause, and in Exchange district by nearly four per 1,000.

CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1000 in the different districts of the City during the year 1909.

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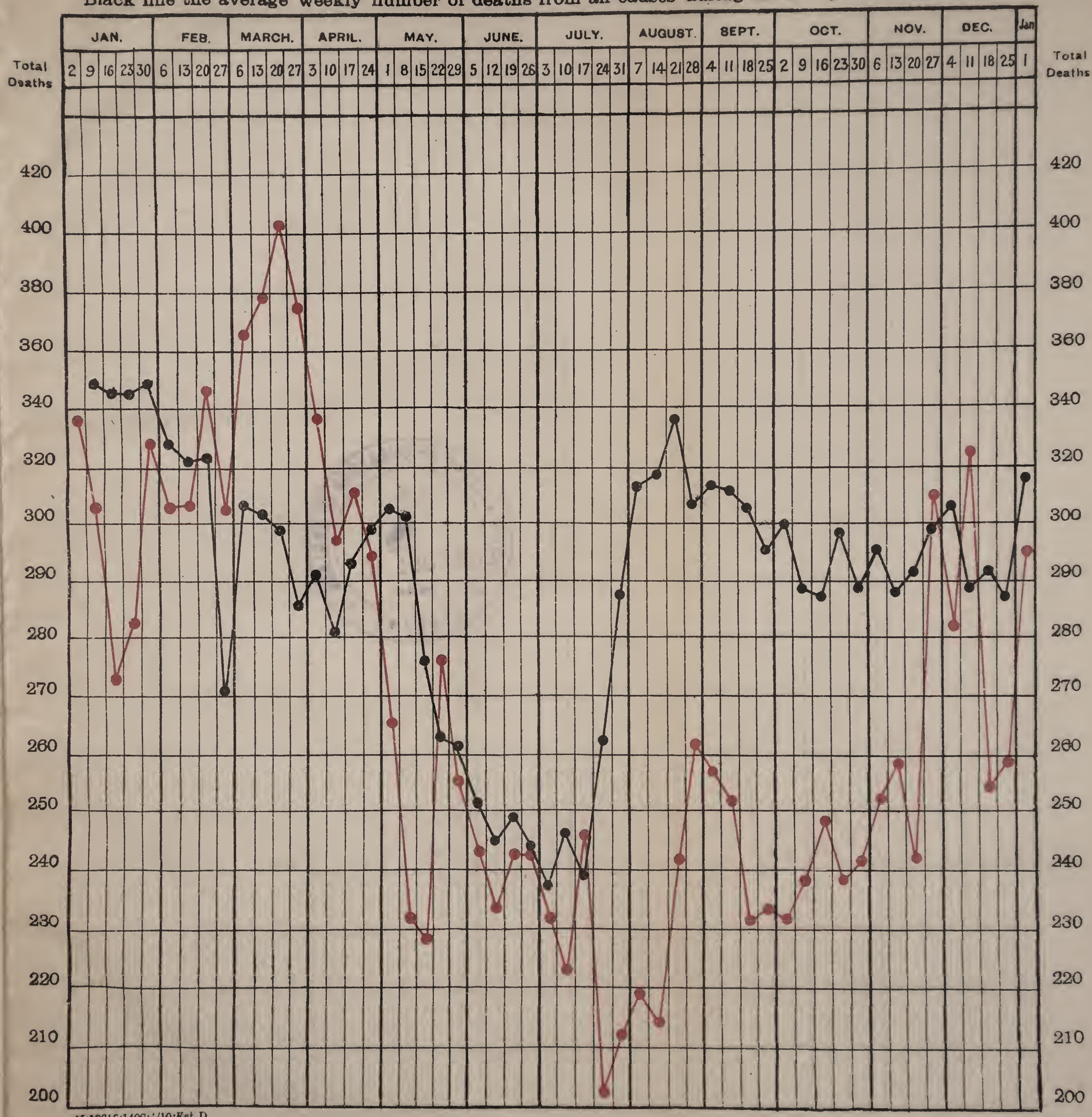
Comparative view of the Death Rate per 1000 in the different districts of the City during the year 1861.

CITY OF LIVERPOOL.

CITY OF LIVERPOOL.

COMPARATIVE MORTALITY CHART.

The Red line denotes the weekly number of Deaths from all causes during the year 1909; the Black line the average weekly number of deaths from all causes during the five years 1904 to 1908;



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Measles prevalent from the middle of February to the middle of April.


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The following table shows the population, number of deaths, and the corrected death-rate per 1,000 during the last twenty-five years:—

Year.	Population.	No. of Deaths.	Rate per 1,000.
1885	537,548	13,764	25·6
1886	534,088	13,919	26·1
1887	530,649	14,006	26·4
1888	527,233	12,159	23·1
1889	523,838	13,047	24·9
1890	520,466	14,293	27·5
1891	518,302	13,911	26·8
1892	519,590	12,671	24·4
1893	520,882	13,919	26·7
1894	522,178	12,073	23·1
*1895	652,523	16,215	24·8
1896	658,050	14,060	21·4
1897	663,633	15,117	22·8
1898	669,243	14,853	22·2
1899	674,912	16,276	24·1
1900	680,628	15,785	23·1
1901	686,332	14,879	21·6
**1902	710,337	15,396	21·6
1903	716,810	14,240	19·8
1904	723,430	15,851	21·9
***1905	733,714	14,103	19·2
1906	739,180	15,001	20·2
1907	746,144	13,676	18·3
1908	753,203	13,930	18·5
1909	760,357	13,945	18·3

* City area extended. ** Garston included. *** Fazakerley included.

The following tables give the estimated population, the number of deaths recorded, the total death-rate, and the infant mortality rate to 1,000 births of eighty-two of the large towns of the United Kingdom:—

TOWNS.	Estimated Population in the middle of the year 1909.	No. of Deaths.	Annual Rate to 1000 of Population.	Deaths under 1 year to 1,000 Births.
London	4,833,938	67,632	14·0	108
Croydon	161,078	1,880	11·7	80
Willesden	160,424	1,670	10·4	97
Hornsey	95,628	793	8·3	61
Tottenham	129,464	1,485	11·5	89
West Ham	321,767	4,504	14·0	124
East Ham	149,575	1,471	9·9	100
Leyton	129,614	1,325	10·3	82
Walthamstow	136,602	1,306	9·6	91
Hastings...	68,165	848	12·5	79
Brighton...	130,926	1,994	15·3	96
Portsmouth	214,726	3,045	14·2	96
Bournemouth	72,368	921	12·8	100
Southampton	124,667	1,660	13·4	106
Reading	82,995	953	11·5	95
Northampton	97,752	1,296	13·3	110
Ipswich	74,889	988	13·2	92
Great Yarmouth	53,430	935	17·5	125
Norwich	124,136	1,717	13·9	119
Plymouth	124,180	1,799	14·5	131
Devonport	83,103	961	11·6	96
Bristol	377,642	4,785	12·7	100
Hanley	68,831	1,244	18·1	155
Burton-on-Trent	54,453	651	12·0	102
Wolverhampton	104,633	1,666	16·0	138
Walsall	99,399	1,442	14·5	139
Handsworth	70,186	688	9·8	85
West Bromwich	70,457	1,073	15·3	123
Birmingham	563,629	8,667	15·4	134
King's Norton	81,632	795	9·8	72
Smethwick	70,377	898	12·8	113
Aston Manor	85,257	1,106	13·0	124
Coventry	80,163	1,283	16·0	97
Leicester	244,255	3,139	12·9	127
Grimsby	73,036	970	13·3	118
Nottingham	263,443	4,277	16·3	150
Derby	129,411	1,724	13·4	123
Stockport	103,706	1,702	16·5	132
Birkenhead	121,123	1,926	15·9	123
Wallasey	71,004	905	12·8	83

TOWNS.	Estimated Population in the middle of the year 1909.	No. of Deaths.	Annual Rate to 1000 of Population.	Deaths under 1 year to 1000 Births.
Bootle	69,393	1,172	16·9	122
St. Helens	95,161	1,765	18·6	150
Wigan	90,678	1,723	19·1	173
Warrington	72,276	1,232	17·1	130
Bolton	187,824	2,832	15·1	128
Bury	59,234	958	16·2	130
Manchester	655,435	11,710	17·9	134
Salford	241,950	4,342	18·0	141
Oldham	143,301	2,727	19·1	119
Rochdale	89,653	1,448	16·2	104
Burnley	106,267	1,704	16·1	156
Blackburn	136,959	2,222	16·3	126
Preston	118,519	1,871	15·8	136
Barrow-in-Furness	62,996	766	12·2	81
Huddersfield	94,739	1,540	16·3	95
Halifax	111,911	1,547	13·9	97
Bradford	293,983	4,251	14·5	116
Leeds	484,012	6,784	14·1	122
Sheffield...	470,958	7,077	15·1	118
Rotherham	65,070	859	13·2	116
York	87,004	989	11·4	99
Hull	275,552	4,106	14·9	114
Middlesbrough	105,255	2,004	19·1	158
Stockton-on-Tees	53,417	742	13·9	120
West Hartlepool	79,686	941	11·8	113
Sunderland	159,378	2,693	16·9	135
South Shields	117,627	1,774	15·1	137
Gateshead	131,024	1,655	12·7	112
Newcastle-on-Tyne	281,584	4,166	14·8	119
Tynemouth	55,808	964	17·3	129
Newport, Mon....	78,336	1,193	15·3	115
Cardiff	195,303	2,558	13·1	103
Rhondda	135,894	2,214	16·3	129
Merthyr Tydfil	78,365	1,383	17·7	143
Swansea	98,308	1,902	19·4	159
Edinburgh	355,366	5,426	15·3	119
Glasgow	872,021	15,243	17·5	133
Dundee	169,409	3,084	18·2	144
Aberdeen	181,918	2,650	14·6	151
Dublin	398,356	8,319	20·9	141
Belfast	386,576	7,028	18·2	139
LIVERPOOL	**760,357**	**13,945**	**18·3**	**143**

The above table is, with the exception of Liverpool, taken without correction from the Returns of the Registrar-General of England and the Registrar-General of Scotland

INFANTILE MORTALITY.

This important subject has been fully dealt with in previous Reports, to which reference can be made by those requiring fuller information. The last five years have shown a conspicuous diminution in infant mortality, and this decline has been maintained during 1909, the rate being 143 per 1,000 births.

The mortality amongst infants, however good their surroundings, and however intelligently maternal care is exercised, is considerable; a certain proportion are premature; some are born with malformations and other defects; others, the offspring of weakly parents, in spite of all care, succumb to one or other of the many ailments to which infancy is susceptible; making due allowance for these, an annual death-rate amongst infants of 80 per thousand seems unavoidable. In the poorer districts it is plain to the most casual observer that necessary care and attention are not given to infants; nothing is more common than to see the infant handed over to the custody of children or irresponsible persons, whilst the responsible guardians are engaged in some other occupation. The children of the very poor are in this way exposed to neglect and inattention which, together with improper food and scanty clothing, are reflected in the sacrifice of life.

Amongst the agencies which have been relied upon in this city to lessen the infant mortality are:—

(1) The instruction of the mothers or persons in charge of the infant. A large staff of trained Female Inspectors is employed to visit and give instruction where necessary. Many thousands of cards of instruction are distributed throughout the city. The Notification of Births Act greatly facilitates this work.

(2) Help of a somewhat similar kind is given through the midwives.

(3) For those mothers who are unable to suckle their infants a suitable food is provided at a price within the reach of all. (See page 186.)

(4) Private philanthropy, by crêches, district nursing, &c., co-operates in the good work. The crêches are situated in Juvenal Street and Everton Road in the Central, Wesley Street in the southern, and Beaumont Street in the eastern district of the city. These establishments afford for girls about to leave school most valuable fields for instruction in the proper management of infants and very young children. Nearly two years ago the attention of the Education Committee was called to this matter, which has received the approbation of the Infant Life Preservation Committee and of the Health Committee, but unhappily these facilities are not yet availed of for the purpose.

(5) Hospital accommodation for some of the infants suffering from measles and whooping cough, which benefits not only the sufferer, but removes the source of infection.

(6) Greater municipal cleanliness; improvements in scavenging and cleansing, and the removal of all refuse likely to harbour flies. The substitution of appropriate ashbins for large and foul ashpits, and the provision of an unrestricted water supply.

(7) The removal of insanitary areas, and the erection of proper dwellings in their place.

It must never be forgotten that, as regards feeding and care, whatever it is in the power of the municipality to do in regard to the preservation of infant life is insignificant when compared with what it is in the power of the mother to do. If the mother will suckle the infant, its risks are slight. If she will not do so, the Corporation proves but a poor foster-mother, owing to the absolute impossibility of fulfilling the duties which only the mother herself can discharge.

It is well known that infant mortality varies widely, not only in different towns, but in the various wards or districts of the same towns. Poverty or riches, sanitary or insanitary conditions, occupation or the want of it, high birth rate or low, all play their part in bringing these variations about. But every extended inquiry into the intricate subject of infant mortality brings to light the fact that parents living approximately under the same social and sanitary conditions have such varying success in rearing their infants that the personal factor deserves a careful study.

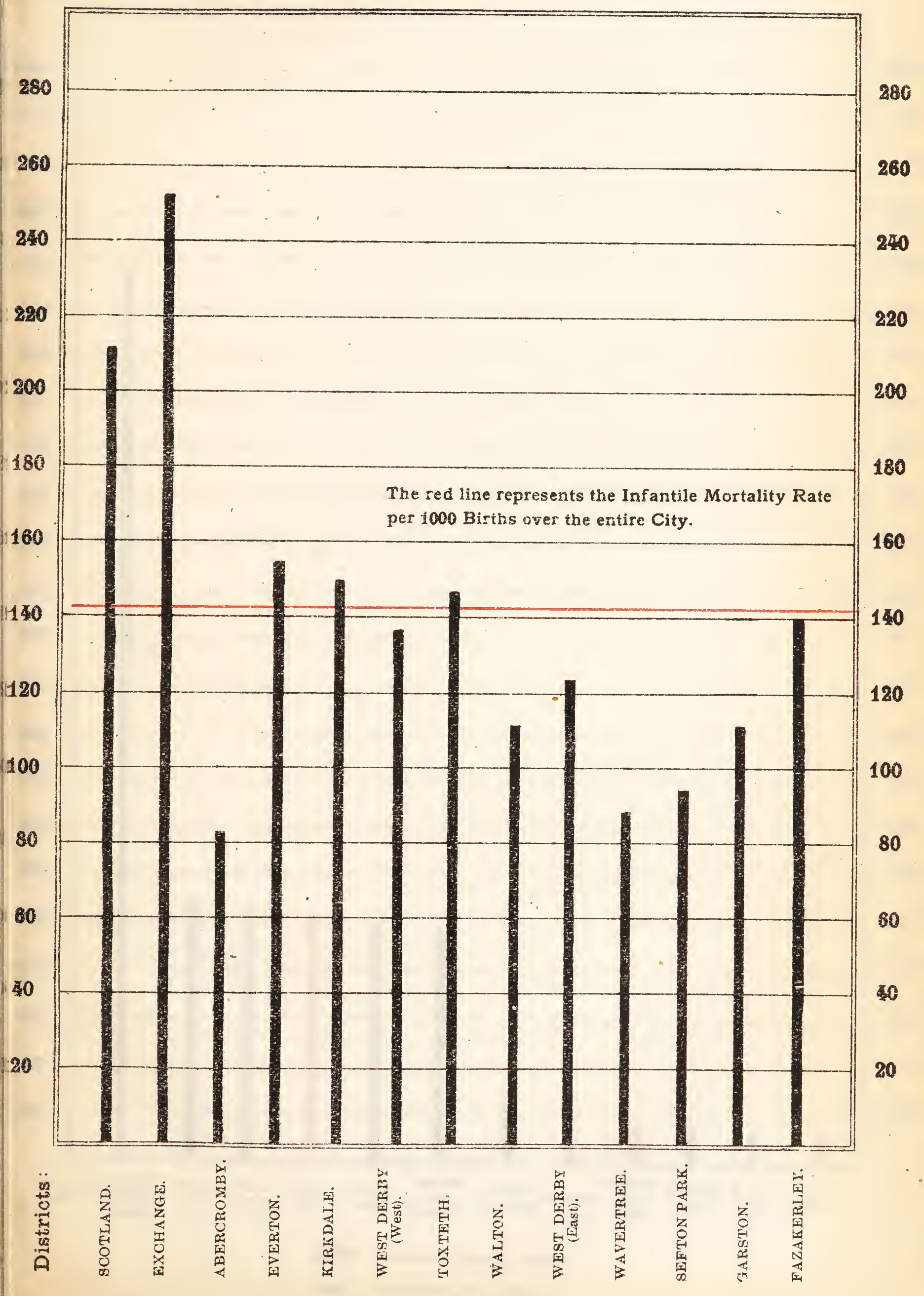
The highest infant mortality is always reached in the summer and early autumn, the cause of death being ascribed to diarrhœa. The subject has been carefully investigated bacteriologically, but no organism so far has been identified solely as the cause. The contents of some of the foul feeding bottles have been subjected to analysis, with results showing that this liquid was of an extremely dangerous character, and certain samples have proved so highly virulent as to kill the animal inoculated with it within 48 hours.

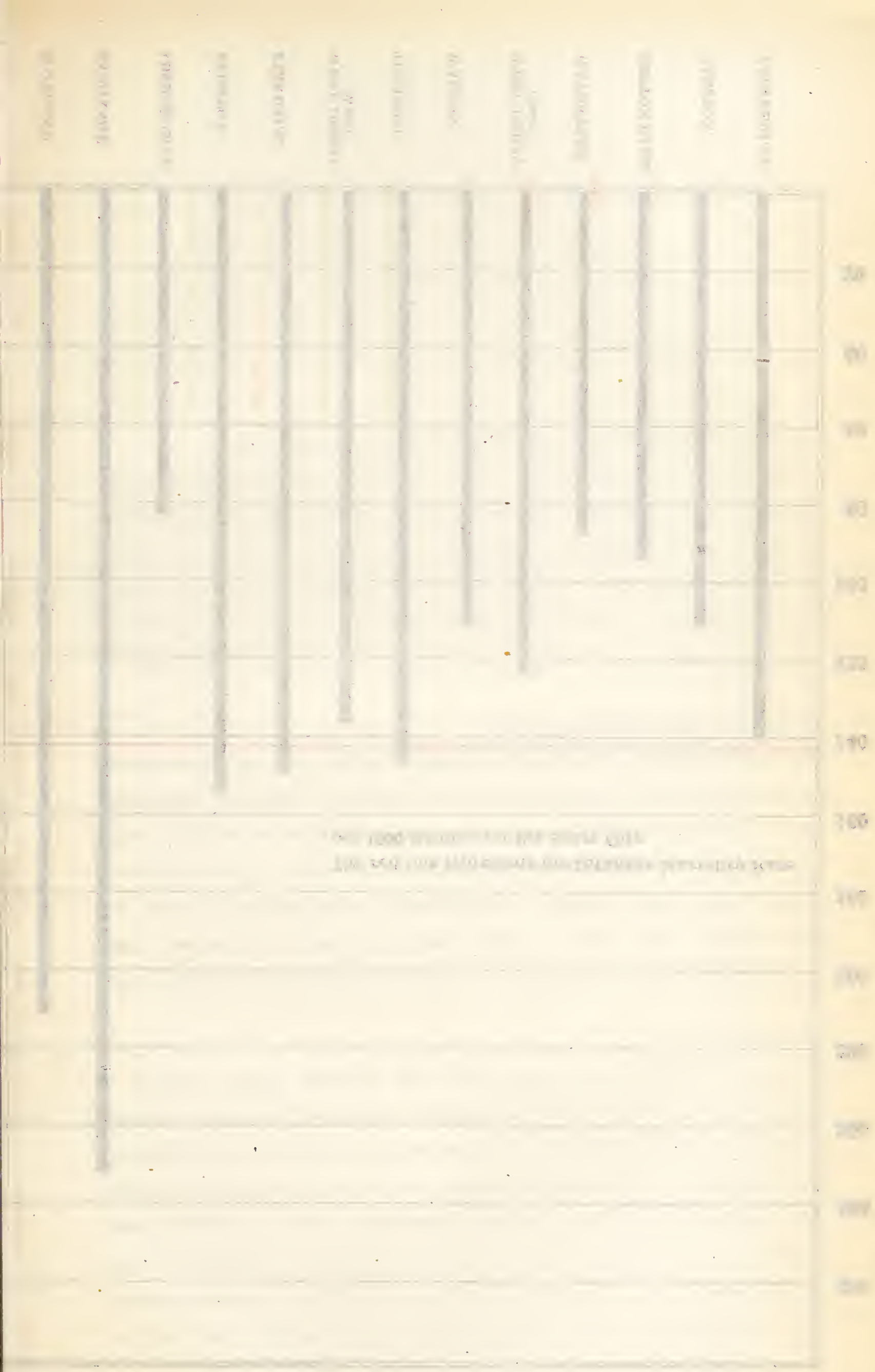
The Medical Officer has for many years pointed out that milk, as nature intended it to be given to infants, is never once exposed to the air, that it passes directly at the time of the manufacture in the gland to the stomach; its composition, temperature and mixture, adapt it to the needs of the offspring; it has neither abstractions, adulterations, preservatives nor uncleanliness; it is, moreover, bacteriologically clean and pure. Nothing the municipality can do can equal this.

CITY OF LIVERPOOL.

Comparative view of the Infantile Mortality per 1000 Births in the different districts of the City during the year 1909.

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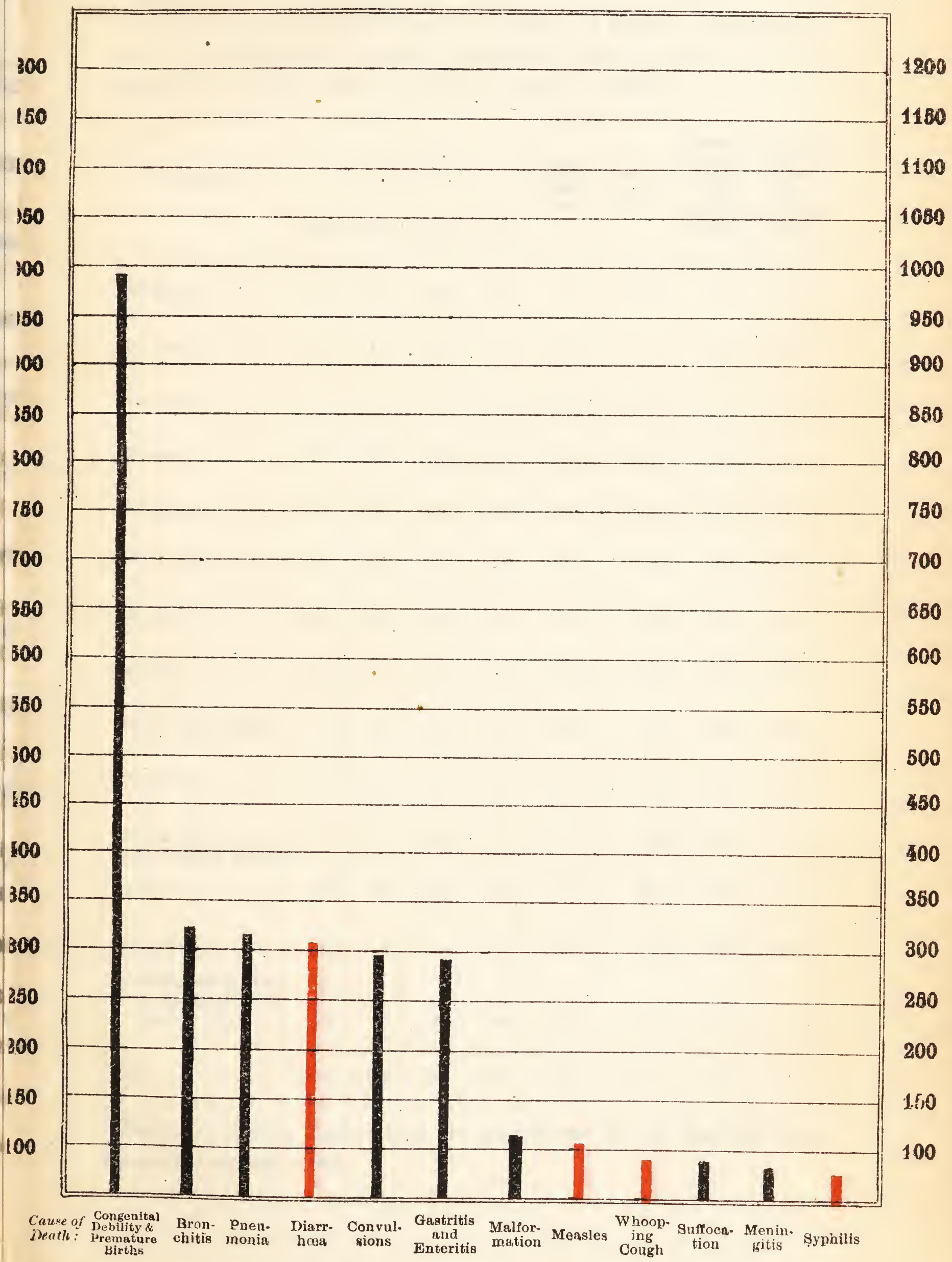


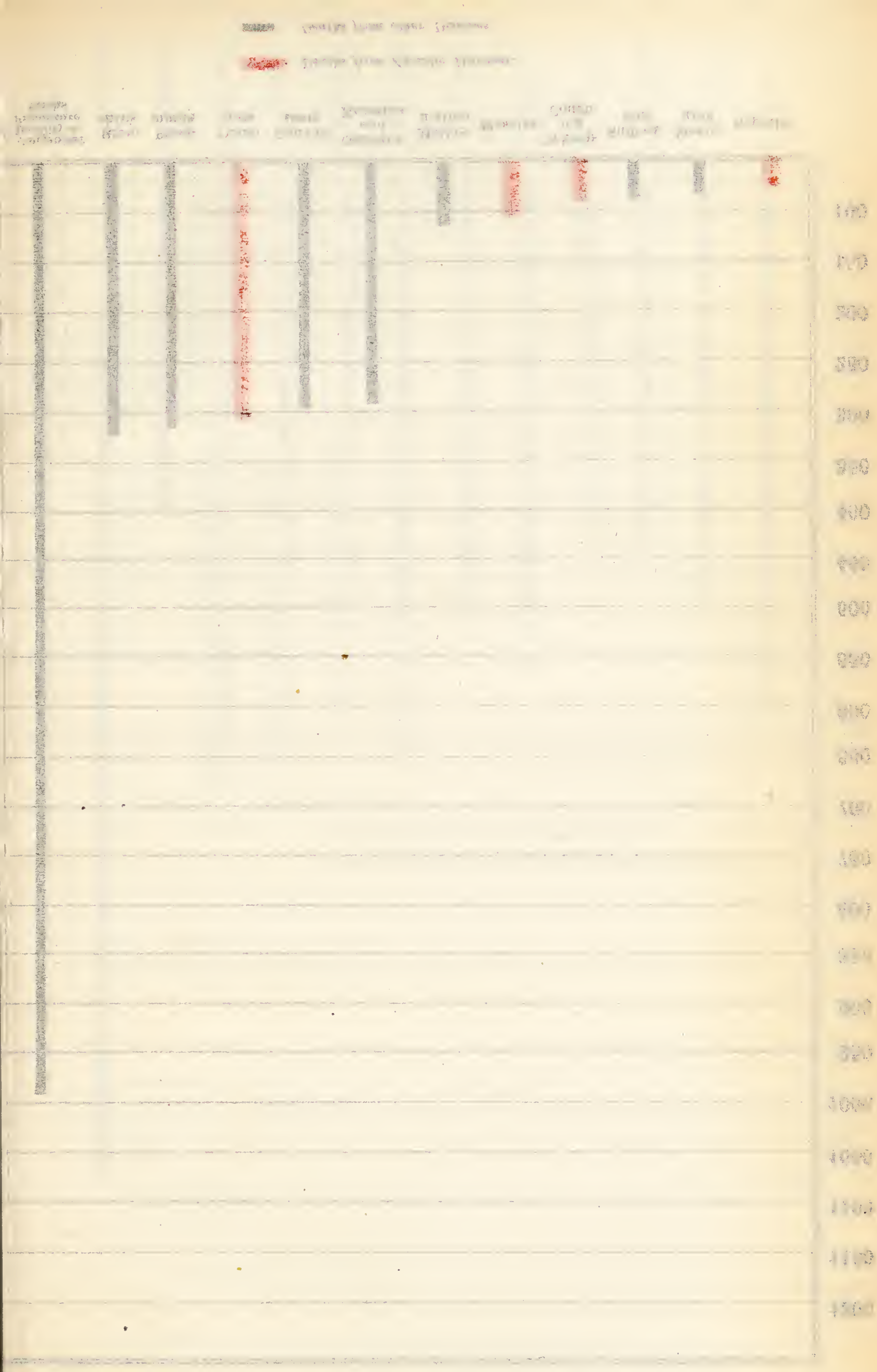


CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of Infantile Mortality (below 1 year of age) during the year 1909.

5690[17545]6978Q





The following Table indicates the incidence of Infantile Mortality in the various Districts of the City, and during different seasons, also the proportion of deaths under five years to the total deaths:—

Districts.	Quarters.				Deaths under 5 years of age.	Total Deaths.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.
	March.	June.	Sept.	Dec.				
Scotland	198	171	203	169	741	1,441	51·4	21·2
Exchange	128	117	126	116	487	1,251	38·9	25·2
Abercromby	63	69	56	59	247	910	27·1	8·3
Everton	336	301	262	263	1,162	2,555	45·4	15·7
Kirkdale	153	106	169	132	560	1,341	41·7	14·8
West Derby (West).	197	132	143	152	624	1,591	39·2	13·8
Toxteth	196	197	200	187	780	1,908	40·8	14·6
Walton	114	83	72	84	353	882	40·0	10·8
West Derby (East) .	79	59	69	77	284	877	32·3	12·3
Wavertree	39	24	34	48	145	436	33·2	8·8
Sefton Park ..... (late Toxteth Rural)	37	17	20	19	93	406	22·9	9·6
Garston	28	24	32	30	114	289	39·4	11·3
Fazakerley	4	5	9	13	31	58	53·4	14·0
Workhouses & Hospitals (Residences outside City)	24	23	30	26	103	816	12·6	—
City	1,596	1,328	1,425	1,375	5,724	14,761	38·7	14·3

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

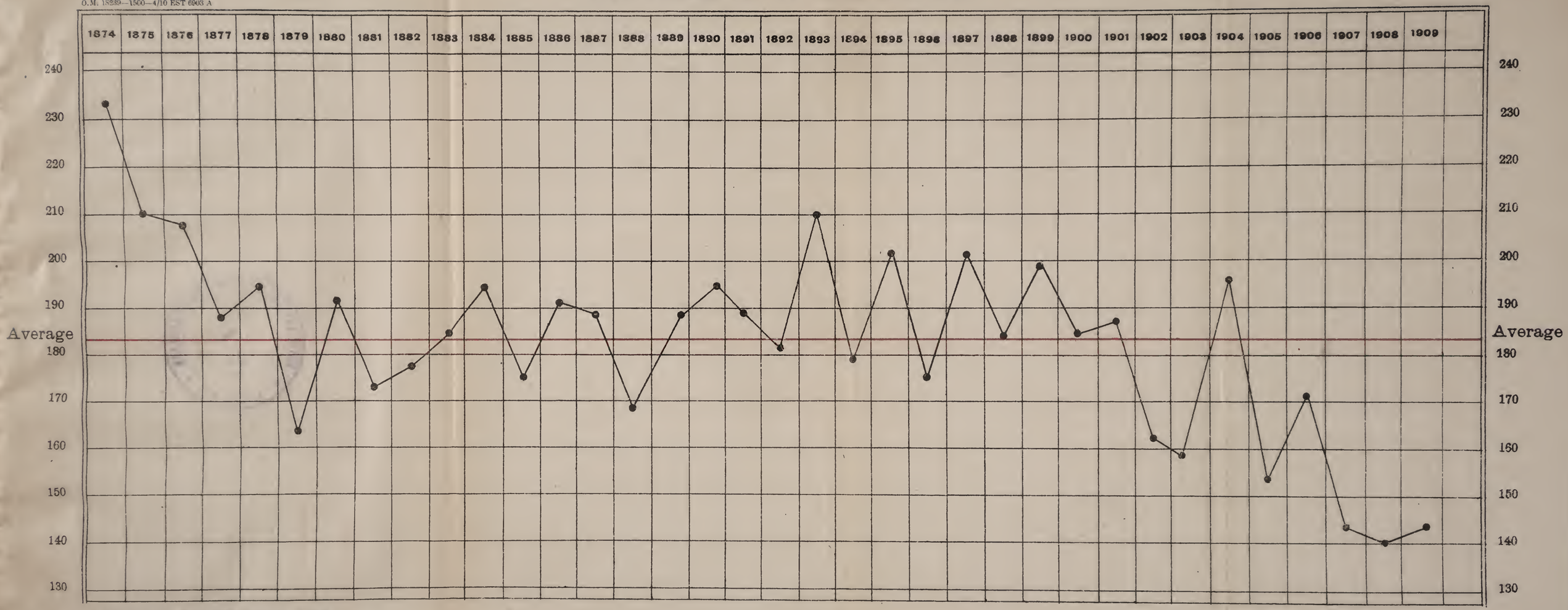
The proportion which the deaths of children under five years of age has borne to the total deaths in the various districts of the city during the last six years is shown in the following table, and also the proportion of deaths of infants under one year of age to every hundred births registered:—

DISTRICTS.	1904.		1905.		1906.		1907.		1908.		1909.	
	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.	Percentage of Deaths under 5 years to Total Deaths.	Percentage of Deaths under 1 year to Total Births.
Scotland	57·7	25·8	49·6	22·7	54·5	24·7	50·3	24·0	48·0	20·9	51·4	21·2
Exchange	43·3	28·1	36·0	24·0	41·2	26·0	36·6	25·0	38·0	24·9	38·9	25·2
Abercromby	34·5	13·3	31·8	12·4	33·0	12·0	27·2	9·4	31·1	10·6	27·1	8·3
Everton	55·0	21·3	45·7	15·9	50·9	20·3	40·3	15·0	44·3	16·0	45·4	15·7
Kirkdale	51·7	21·4	44·5	17·4	45·5	16·2	43·5	15·2	39·0	14·6	41·7	14·8
West Derby (West)	45·2	18·1	40·7	14·5	43·0	15·4	37·5	13·6	37·9	12·8	39·2	13·8
Toxteth.....	51·2	19·1	37·7	14·8	45·4	17·9	39·1	14·6	39·5	14·0	40·8	14·6
Walton	46·3	15·7	40·1	10·5	38·2	12·2	37·9	10·8	34·4	8·7	40·0	10·8
West Derby (East).....	38·5	14·6	33·1	11·2	36·9	14·1	29·1	10·3	33·7	11·0	32·3	12·3
Wavertree	46·6	15·1	42·7	11·2	44·7	12·7	38·9	9·9	38·1	10·4	33·2	8·8
Sefton Park ..... (late Toxteth Rural)	30·8	13·8	22·2	9·5	27·2	9·0	20·9	7·7	21·5	7·0	22·9	9·6
Garston	55·2	18·3	40·1	11·7	44·8	13·2	45·2	14·5	38·5	11·0	39·4	11·3
Fazakerley	33·3	13·0	32·0	8·4	42·5	10·0	19·5	3·9	33·3	11·4	53·4	14·0
Workhouse and Hospitals (Residences outside of City)	14·8	...	10·8	...	13·4	...	13·2	...	12·2	...	12·6	...
City	47·3	19·6	39·1	15·4	43·1	17·1	37·4	14·3	37·9	14·0	38·7	14·3

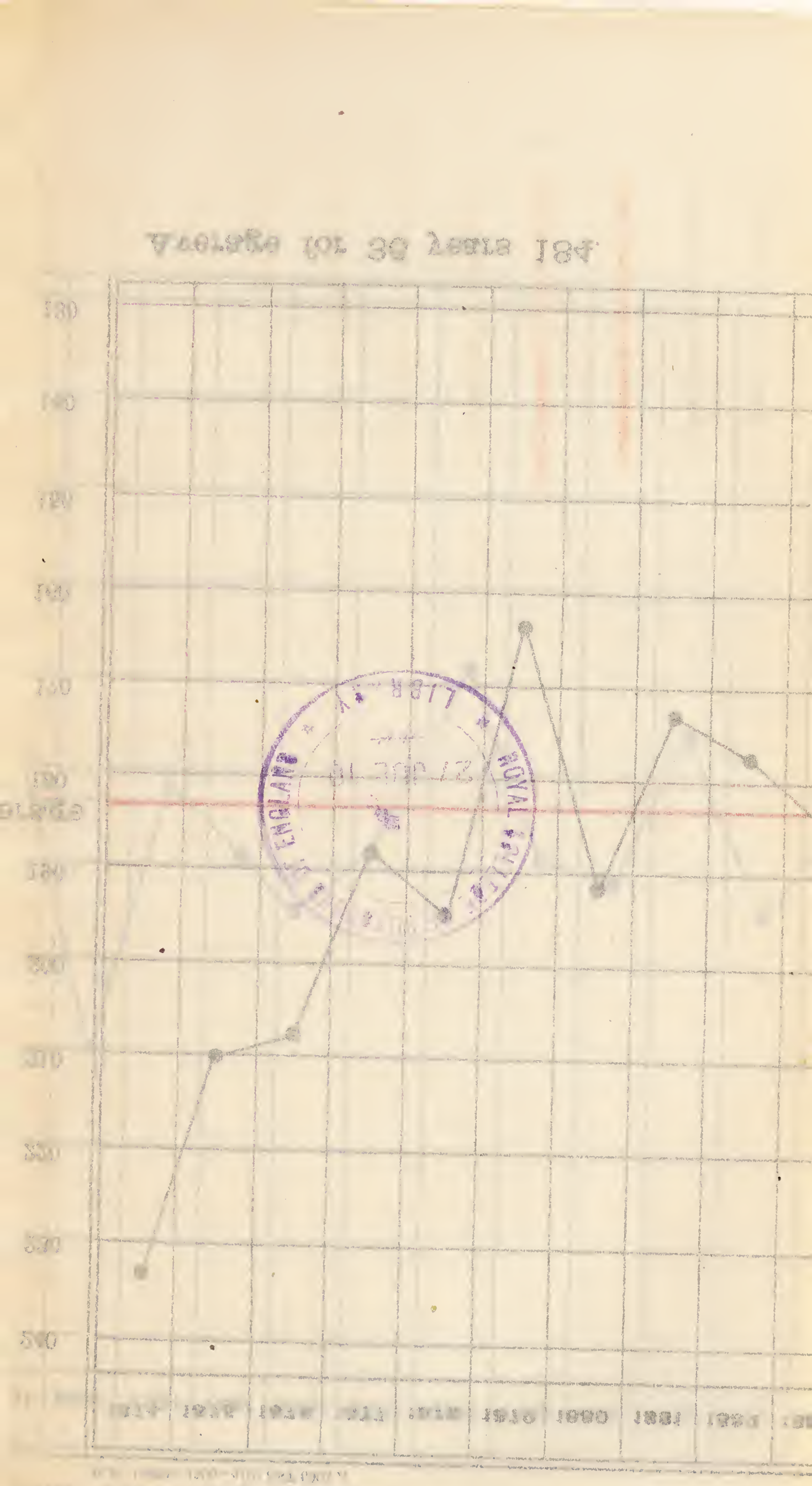
CITY OF LIVERPOOL.

Infant Mortality per 1000 Births 1874—1909.

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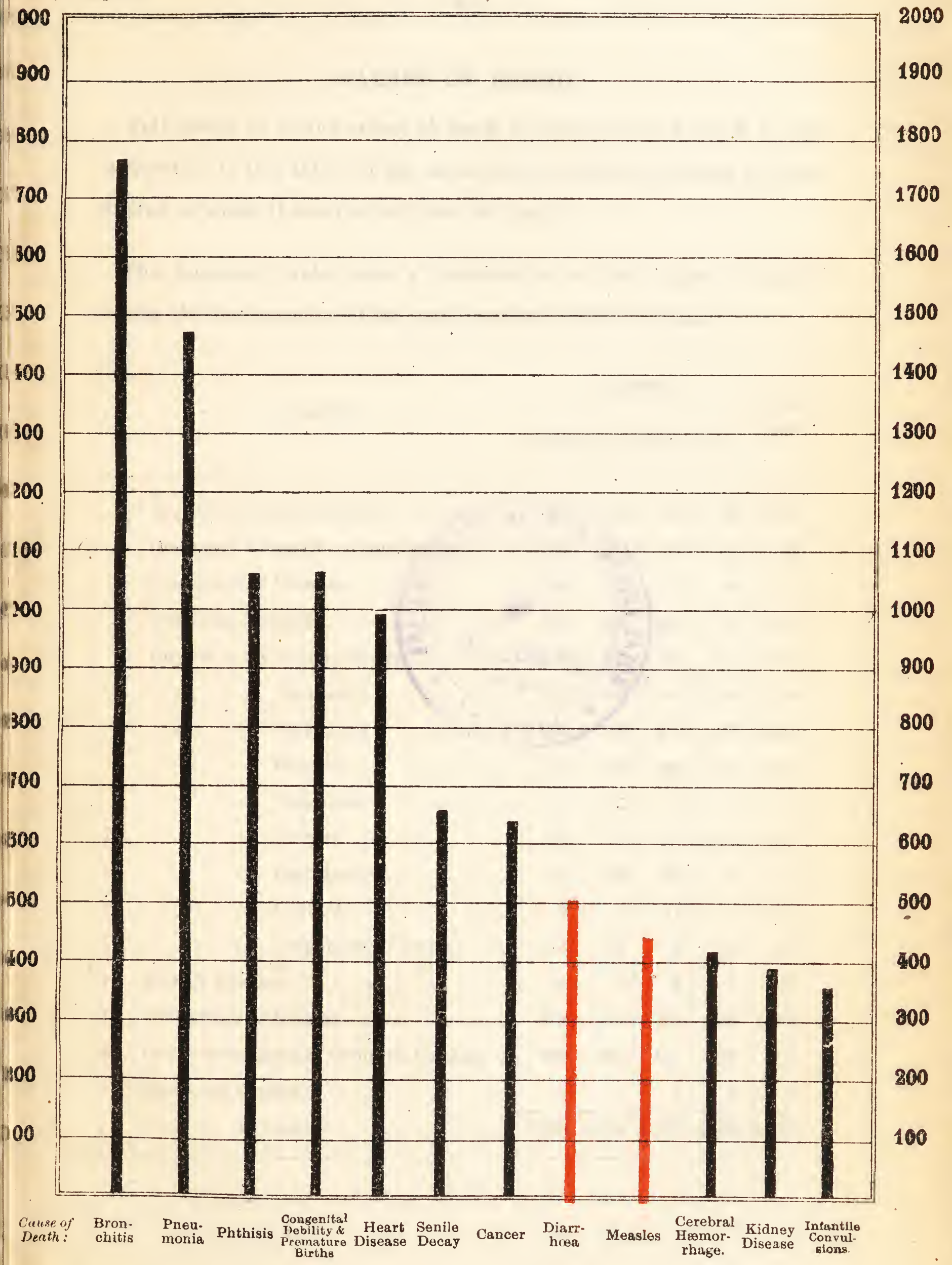
Average for 36 years 184.

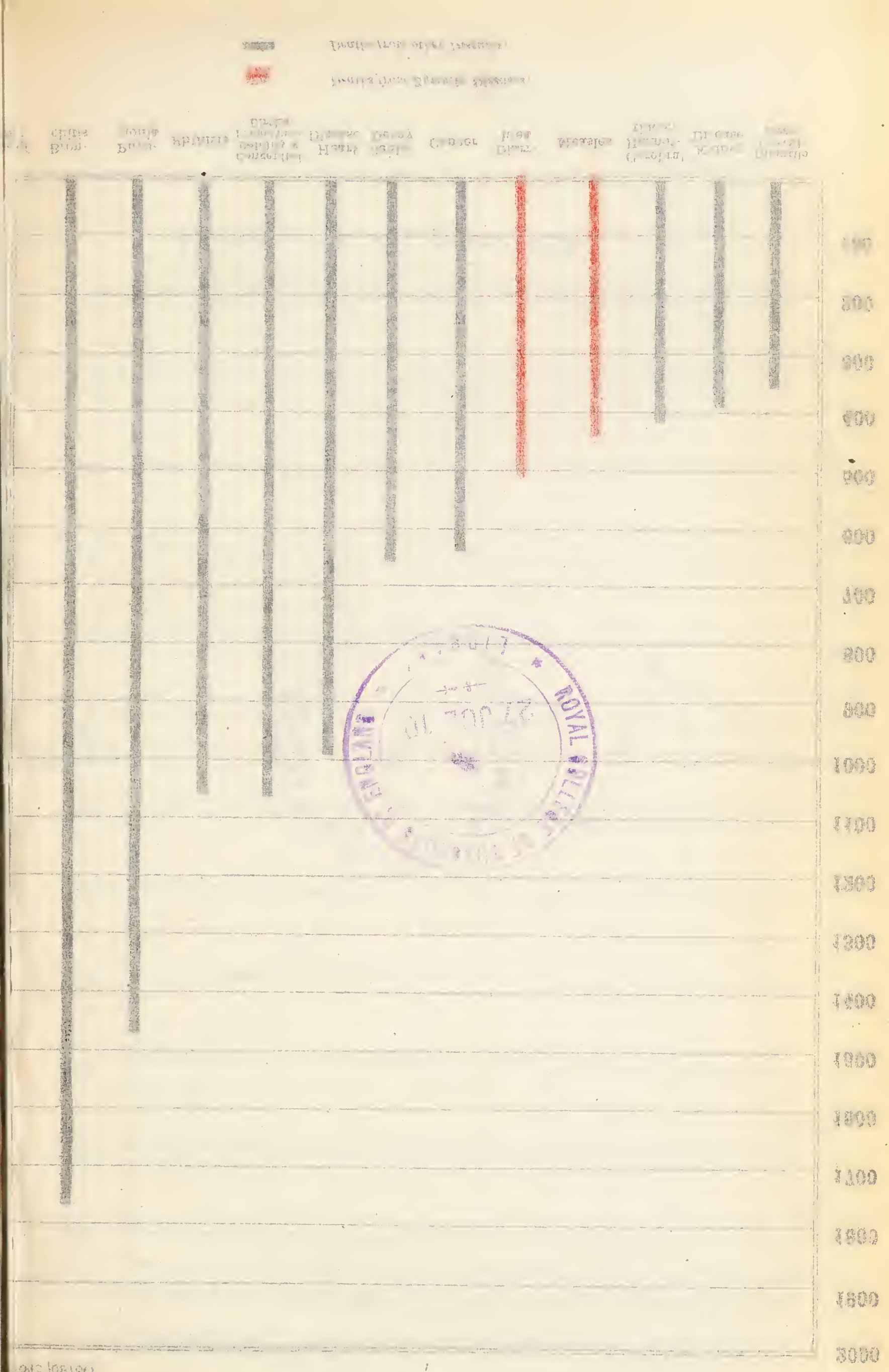

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CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of Death during the year 1909.

5590[17545]6978O





Comparative view of levels of the principal causes

CITY OF FAREHAM

CAUSES OF DEATH.

Full details as to the causes of death are set forth in table *F* in the Appendix; in this table the age at which each death took place and the district in which it occurred will also be found.

The following table gives a classification of the causes of death during the four quarters of the year, grouped under 16 classes:—

CLASSES.	Quarters.				Year 1909.
	March	June.	Sept.	Dec.	
1. Zymotic and Septic Diseases	505	492	562	322	1,881
2. Diseases of Uncertain or Variable Seat.....	187	186	173	182	728
3. Constitutional Diseases.....	46	38	43	46	173
4. Tubercular Diseases	450	385	318	350	1,503
5. Diseases of the Nervous System	440	330	332	344	1,446
6. ,, ,, Circulatory ,, ...	330	294	236	253	1,113
7. ,, ,, Respiratory ,, ...	1,284	783	489	937	3,493
8. ,, ,, Digestive ,, ...	211	180	299	231	921
9. ,, ,, Lymphatic ,, ...	5	5	3	5	18
10. ,, ,, Urinary ,, ...	128	91	99	104	422
11 ,, ,, Reproductive ,, ...	27	29	20	19	95
12. ,, ,, Joints, &c.	8	4	12	5	29
13. ,, ,, Integumentary System	13	12	9	14	48
14. Dietetic Diseases.....	5	1	5	3	14
15. Developmental Diseases	572	418	386	520	1,896
16. Causes investigated at Coroner's Inquests ...	290	235	181	267	973
Causes not specified	2	1	2	3	8
All Causes	4,503	3,484	3,169	3,605	14,761

ZYMOTIC DISEASES.

This class of disease is one calling for special attention, and is dealt with in some detail in the following tables, the first of which shows the localities and the periods of the fatal prevalence of zymotic diseases, and the subsequent tables deal specifically with each form of zymotic disease during 1909 :—

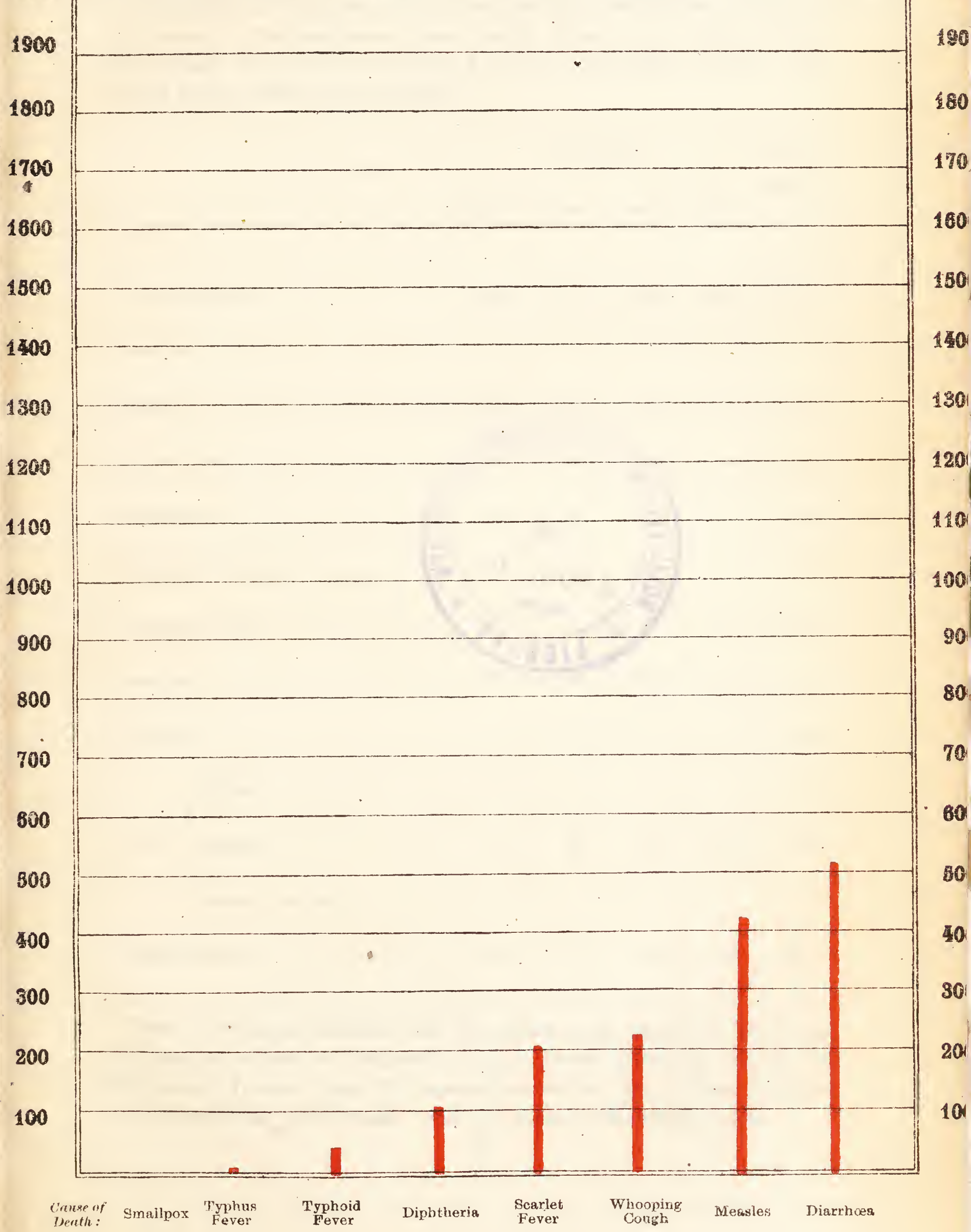
DISTRICTS.	Deaths from all causes.	ZYMOTICS.				
		Quarters.				Percentage of Zymotic Deaths to Deaths from all causes.
		March.	June.	Sept.	Dec.	
Scotland	1,441	45	57	84	42	15·8
Exchange	1,251	40	32	61	28	12·8
Abercromby	910	20	22	25	16	9·1
Everton	2,555	107	127	108	58	15·6
Kirkdale	1,341	57	39	73	39	15·5
West Derby (West)	1,591	71	52	47	35	12·8
Toxteth	1,908	52	68	78	34	12·1
Walton	882	38	32	28	17	13·0
West Derby (East)	877	19	27	23	21	10·2
Wavertree	436	13	9	11	11	10·0
Sefton Park	406	10	8	9	5	7·8
(late Toxteth Rural) Garston	289	10	7	7	4	9·6
Fazakerley	58	1	2	1	1	8·6
Workhouses and Hospitals (Residences outside City)	816	22	10	7	11	6·1
City	14,761	505	492	562	322	12·7

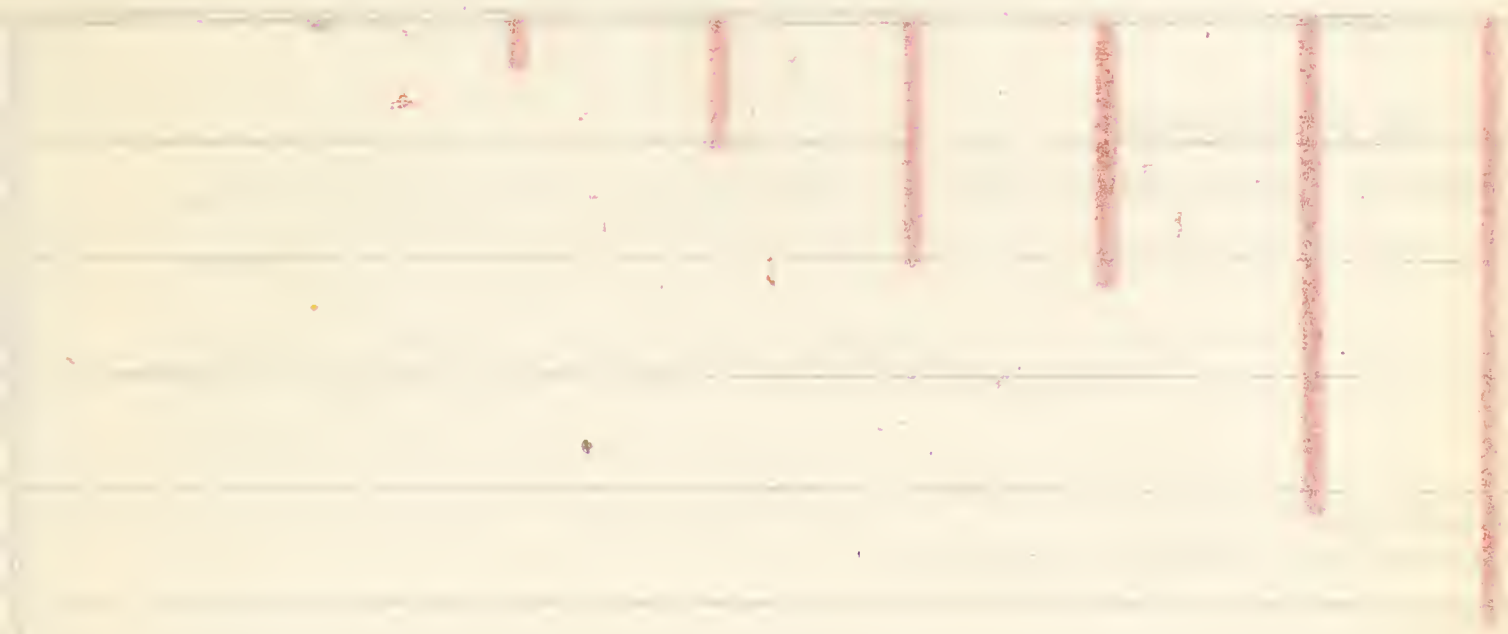
Deaths in Public Institutions are transferred to the Districts from whence the patients came.

CITY OF LIVERPOOL.

Comparative view of the total number of Deaths from the principal Zymotic Diseases during the year 1909.

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Zymotic diseases occasioned 1,881 deaths during the year 1909, and accounted for 12·7 per cent. of the total mortality within the city during this period. The death-rate from zymotic diseases per 1,000 was 2·4. The average rate for the preceding five years (1904-1908) was 3·3. The deaths during 1909 were as follows:

	Quarters.				Year 1909.
	March.	June.	Sept.	Dec.	
Total Zymotics	505	492	562	322	1,881
Smallpox	...	...	...	...	...
Measles	161	213	74	23	471
Scarlet Fever	86	63	26	44	219
Diphtheria	40	22	23	27	112
Membranous Croup	1	1	...	1	3
Whooping-cough	89	64	17	58	228
Diarrhœa	30	42	352	90	514
Influenza	41	23	6	14	84
Fever — Typhus	3	4	...	1	8
Fever — Typhoid	8	16	10	20	54
Fever — Simple Continued	...	...	...	...	...
Other Zymotics	46	44	54	44	188

Note.—Influenza, Measles, and Whooping-cough appear to have been predisposing causes in the case of many deaths primarily ascribed to Respiratory Disease (page 23) inasmuch as one or other of these Zymotics had preceded the fatal illness. See also notes to succeeding tables.

SMALL-POX.

Small-pox was introduced into the city on six separate occasions during the year. In three instances the patients were removed direct from ships, and one, who arrived apparently well, developed the disease at his residence. The other two instances were those of Russian emigrants who arrived overland.

Together with the removal of the patients to hospital, isolation and re-vaccination of those who had been exposed to infection, disinfection of the infected clothing, houses, &c., were all carried out, and daily visits were made for fourteen days to infected houses to inquire if any sickness of any kind had arisen.

Including the imported cases, there was a total number of 9 cases notified, all of whom recovered.

The accompanying table is of interest as showing the greater intervals which are occurring in any considerable prevalence of small-pox.

Until 1877, deaths only were recorded, and between that date and the passing of the Notification Act (1889) the record was incomplete. Since that date, however, it is unlikely that any case escaped registration.

In 1884 there were nearly 200,000 fewer people in the city than there were in 1903, hence the relative incidence in 1903 was very much less than that of 1884. Efficiency of vaccination is the safeguard against small-pox.

The medical inspection of school children has brought to light valuable information as to the efficiency of vaccination in different localities, and it is disquieting to observe that in some districts there appears to be a growing neglect of vaccination, as evidenced by the fact that the younger children show a less satisfactory vaccination than the older ones.

It appears that over the whole City the percentage of unvaccinated boys and girls leaving school is 4·5, but in the new admissions of children to the schools it is 7·8 per cent., an addition which cannot be regarded without gave apprehension as to the results of exposure to smallpox. In one Poor-law district nearly 14 per cent. of the newly admitted children are unvaccinated—a most discreditable state of affairs.

SMALL-POX DURING THE LAST FORTY-SEVEN YEARS.

Years of Increase.	No. of Cases.	Deaths.	Years of Subsidence.	No. of Cases.	Deaths.
1863	Unrecorded	100			
1864	,,	482			
1865	,,	459			
1866	,,	102			
			1867	Unrecorded	22
			1868	,,	18
			1869	,,	20
1870	,,	174			
1871	,,	1,919			
1872	,,	50			
			1873	,,	10
			1874	,,	30
			1875	,,	29
1876	,,	386			
1877	1,660	299			
			1878	35	3
			1879	12	...
			1880	14	2
			1881	262	34
			1882	67	6
			1883	126	26
1884	832	106			
			1885	375	46
			1886	234	29
			1887	23	1
			1888	27	1
			1889	9	1
			1890	2	...
			1891	21	2
			1892	177	13
			1893	75	9
			1894	229	20
			1895	130	12
			1896	8	...
			1897	6	...
			1898	17	2
			1899	10	1
			1900	156	23
			1901	37	6
1902	560	20			
1903	1720	141			
			1904	27	2
			1905	15	...
			1906	19	1
			1907	19	...
			1908	7	...
			1909	9	...

TYPHUS FEVER.

This disease is particularly liable to spread amongst dirty, ill-fed, and intemperate persons, and incessant watchfulness is necessary in order to hold it in check. The disease almost always attacks the children of the family first; in them the symptoms are obscure, and are often unrecognised until adults succumb.

Of the total number of cases, 8, as the table shows, resulted fatally, the whole of the deaths taking place during adult age, the period when the disease is most fatal. Two of these were imported cases.

The total number of cases reported was 17 (the lowest number recorded in any year), against 21 in the preceding year; the average number of the last five years being 77.

Ages at Death.											
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
—	—	—	—	—	—	1	*6	*1	—	—	8

* Two non-residents.

Reports for preceding years sufficiently illustrate the importance of the daily visits which are made to houses which have been infected with typhus fever, as well as the importance of keeping under supervision every person who is known to have been in contact with the patient. None of the stringent measures which have been adopted against typhus are in any way relaxed.

The number of deaths during each of the preceding ten years has been as follows:—

1899	... ...	13 deaths.
1900	... ...	11 ,,
1901	... ...	14 ,,
1902	... ...	25 ,,
1903	... ...	57 ,,
1904	... ...	25 ,,
1905	... ...	28 ,,
1906	... ...	8 ,,
1907	... ...	18 ,,
1908	... ...	10 ,,

List of streets in the city where cases of Typhus Fever occurred during the year 1909.

Streets.	Cases.	Deaths.
Ashfield	4	1
Bidder	1	...
Grove Place	1	...
Lambert	1	1
Mill	2	1
Shakespeare	1	...
Squires	4	2
Toxteth Workhouse	1	1
Walton Workhouse	1	...
William Henry	1	...

TYPHOID FEVER.

There were 278 cases of Typhoid Fever reported during the year, the number being lower than in any preceding year. There were 1,026 in 1902, 681 in 1903, 434 in 1904, 325 in 1905, 491 in 1906, 482 in 1907, and 447 in 1908. The deaths were 54, being 19 fewer than in the preceding year. The figures include the death of non-residents.

Upwards of 80 per cent. of the total number of cases notified during the year were removed to hospital. (See page 267.)

The accompanying charts are instructive. The first one indicates the steady decline in the mortality from typhoid fever since the year 1894, a decline which may be ascribed to various reasons, such as the greater facility for isolation of the sick, the abundant supply of pure water, and the greater care taken in the supervision of those food supplies, more especially milk, which play an important part in the dissemination of this disease.

The second chart indicates the incidence of typhoid fever during each week of the year 1909, the absence of the usual late autumn rise being a very satisfactory feature.

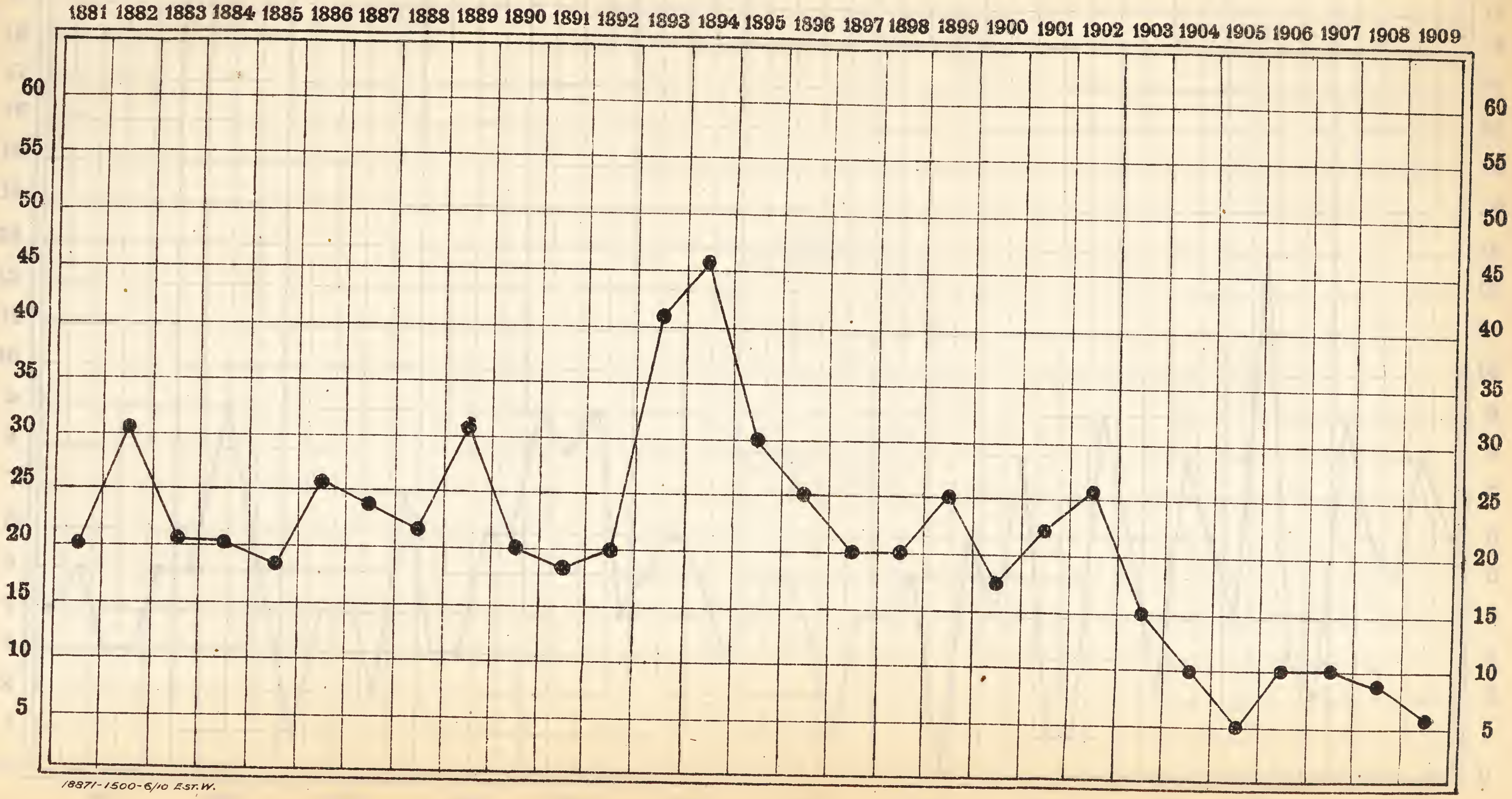
The number of deaths from Typhoid Fever during each of the preceding ten years, 1899-1908, has been as follows:—

1899	... ...	182 deaths.
1900	... ...	120 ,,
1901	... ...	154 ,,
1902	... ...	190 ,,
1903	... ...	108 ,,
1904	... ...	82 ,,
1905	... ...	49 ,,
1906	... ...	85 ,,
1907	... ...	92 ,,
1908	... ...	73 ,,

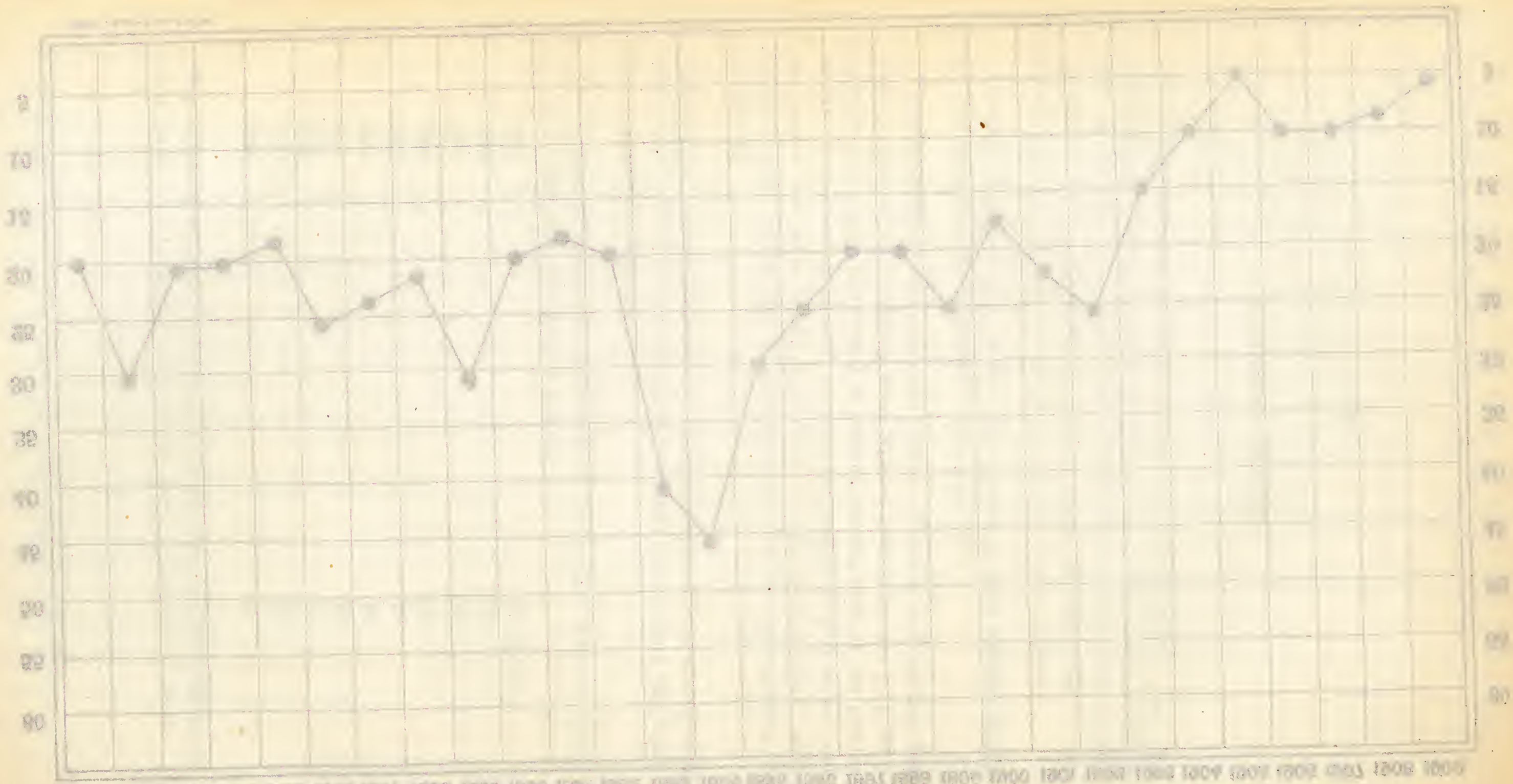
The following table shows the periods of the year and the localities in which deaths from typhoid fever occurred, and also the ages at death.

CITY OF LIVERPOOL.

Death Rate per 100,000 of resident Population from Typhoid Fever, 1881—1909.



18871-1500-6/10 EST. W.

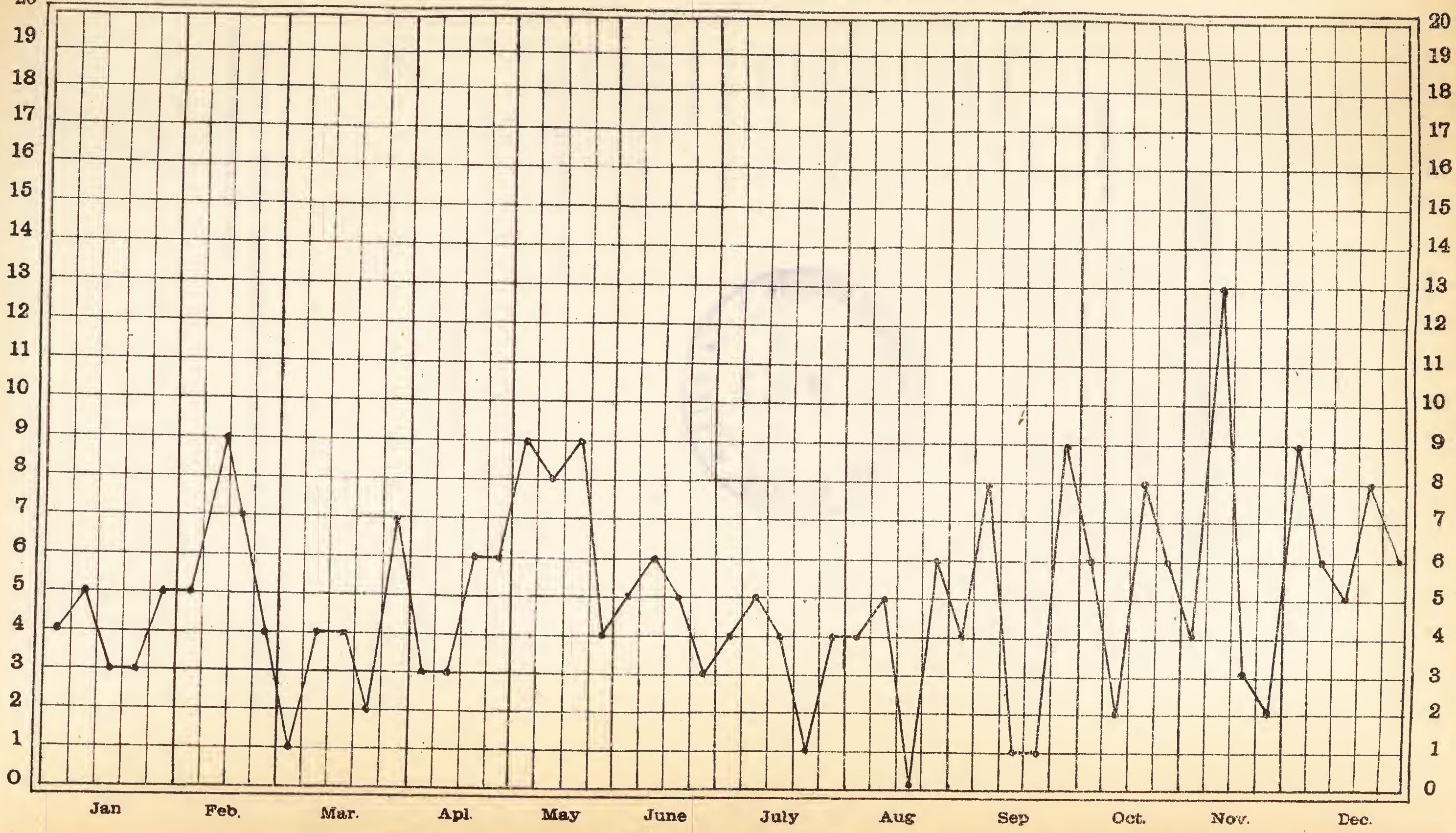


CITY OF LIVERPOOL.

Cases

18871-1500-6/10 Est.X.

Cases of Typhoid Fever reported during each week of 1909



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DEATHS FROM TYPHOID FEVER.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	...	...	1	...	1	...	1	2	3	2	5
Exchange	1	...	1	1	1	...	1	...	4	1	5
Abercromby	...	...	...	1	1	1	1	1	2	3	5
Everton	...	...	2	1	...	...	2	...	4	1	5
Kirkdale	...	...	1	...	1	...	2	1	4	1	5
West Derby (West)	...	...	1	...	...	...	1	2	2	2	4
Toxteth	...	2	1	1	1	...	4	...	6	3	9
Walton	1	...	...	...	...	1	...	...	1	1	2
West Derby (East)	...	...	...	...	...	...	...	...	...	...	...
Wavertree	...	...	1	...	...	...	...	...	1	...	1
Sefton Park (late Toxteth Rural)	...	...	...	...	...	2	...	...	...	2	2
Garston	...	...	2	...	...	...	...	...	2	...	2
Fazakerley	...	1	...	...	...	...	...	...	...	1	1
Hospitals (Residences outside the City)	2	1	1	1	1	...	2	...	6	2	8
City	4	4	11	5	6	4	14	6	35	19	54

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 and upwards.	All Ages.
...	...	...	1	...	5	5	3	13	18	5	4	...	54

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

SCARLET FEVER.

This disease was again prevalent to a considerable extent during the spring and autumn of this year. Fortunately the disease was of a milder type, and accompanied by a lower rate of mortality.

There were 4,059 cases reported during the year, against 4,295 in the preceding year, 2,741 in 1907, 2,959 in 1906, 4,308 in 1905, 2,988 in 1904, and 4,053 in 1903. The public appreciation of the value of isolation continues, and 81·0 per cent. of the cases were removed to hospital, *i.e.*, 3,289 out of a total of 4,059 cases reported. The percentage of the total number of scarlet fever patients removed to hospital during each of the preceding ten years has been as follows:—63·6, 60·8, 54·8, 53·4, 52·9, 74·6, 73·0, 74·0, 78·2, and 82·1, showing that as accommodation was provided it was well availed of.

The mortality from the disease was 5 per cent., the great majority of the deaths being below five years of age. (See table, page 34.) This rate of mortality has been considerably exceeded on previous occasions, and in bygone years the loss of life from this disease was very much more serious than it is now.

Upon the interesting chart facing page 34 will be seen the death-rate from scarlet fever in the City of Liverpool during the last sixty years. For the first half of this period, at intervals of a year or so, the number of deaths resulting from scarlet fever reached proportions which would now be regarded with astonishment, but from the period when hospital provision was found for the isolation of patients, and better administra-

tive methods, aided by various Acts of Parliament, were adopted, there has been a remarkable drop in the fatality from this disease. The lesson is an important one, and may well be applied to other forms of infectious sickness, such as measles, which, although presenting difficulties of its own, would no doubt diminish in amount if a more complete isolation were possible.

The total number of deaths was 219, including 8 non-residents admitted to the City Infectious Hospitals, against 217 last year, and an average of 197 during the preceding five years.

The number of deaths from Scarlet Fever during each of the preceding ten years, 1899-1908, has been as follows:—

1899	... ...	164 deaths.
1900	... ...	113 ,,
1901	... ...	195 ,,
1902	... ...	318 ,,
1903	... ...	201 ,,
1904	... ...	149 ,,
1905	... ...	303 ,,
1906	... ...	193 ,,
1907	... ...	140 ,,
1908	... ...	217 ,,

The table on the next page shows the periods of the year and the localities in which deaths from scarlet fever occurred, and also the ages at death:—

DEATHS FROM SCARLET FEVER.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	4	2	3	4	1	2	3	4	11	12	23
Exchange	3	4	1	1	...	1	...	2	4	8	12
Abercromby	2	...	3	...	...	1	...	...	5	1	6
Everton	8	12	10	7	4	5	2	1	24	25	49
Kirkdale	4	8	...	2	2	2	5	2	11	14	25
West Derby (West)	4	3	2	2	1	2	4	4	11	11	22
Toxteth	1	5	2	3	1	2	3	2	7	12	19
Walton	6	5	3	6	1	...	1	1	11	12	23
West Derby (East)	3	...	2	3	1	...	...	3	6	6	12
Wavertree	1	3	1	2	...	...	1	1	3	6	9
Sefton Park (late Toxteth Rural)	...	1	1	1	...	...	...	2	1	4	5
Garston	3	...	...	1	...	...	...	...	3	1	4
Fazakerley	...	...	...	1	...	...	1	...	1	1	2
Hospitals (Residences outside the City)	4	...	...	2	...	...	2	...	6	2	8
City	43	43	28	35	11	15	22	22	104	115	219

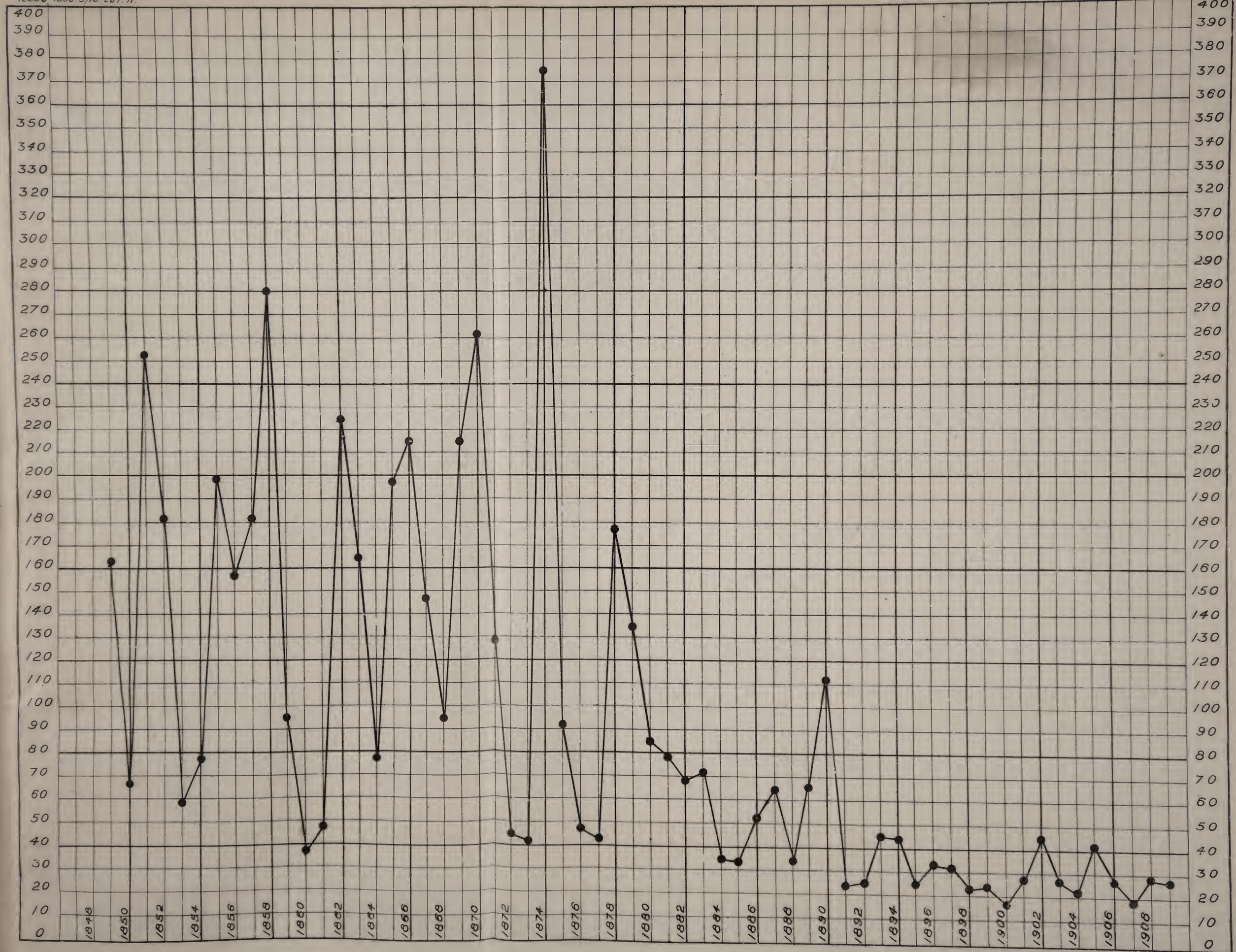
Ages at Death.

Under 1 year.	1—	2—	3—	4—	5 –	10—	15—	20—	30—	40—	50—	All Ages.
8	20	46	33	31	61	8	7	3	2	...	...	219

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

19338-1500. 5/10 EST. N.

CITY OF LIVERPOOL. SCARLET FEVER DEATH RATE PER 100,000, 1848-1909.



CITY OF LIVERPOOL SCAT

MEASLES.

Measles was prevalent during the early months of the year to an extent which rendered necessary the closure for short periods of a number of the Infant schools between the end of January and the middle of March, when all Infants' Departments of all the schools were closed until after the Easter holidays.

The total cases reported during the year were 6,356, showing an increase compared with the preceding year, when the cases reported reached 4,653, as against 5,640 in 1907, 6,819 in 1906, 3,938 in 1905, 9,453 in 1904, 2,727 in 1903, 7,141 in 1902, and 6,766 in 1901. There were 471 deaths directly ascribed to it, the great majority of them being of infants below 3 years of age. The number of deaths in the preceding year was 259.

As has been frequently pointed out, the number of deaths does not fully indicate the destruction of life due to measles, since this disease is commonly associated with bronchitis and pneumonia, and it is beyond any question that deaths primarily due to measles are entered in the returns as due to pulmonary disease. The isolation of the infectious sick in hospital is important and necessary. Hospital accommodation, for a limited number of cases, has now been made for measles, but the deaths from measles do not show a decline comparable to that which has taken place in the forms of infectious disease for which hospital accommodation is available. In the great number of homes in which measles occur isolation in the house is difficult or impossible. In making arrangements for hospital isolation of measles, difficulties of a special kind arise owing to the tender age of the patient, and the peculiarities of the infection in this form of disease.

The tendency of this disease to recur at intervals of about 18 months is well illustrated in the accompanying diagrams. There has, however, been no considerable outbreak since May, 1906, until this year, although the prevalence of the disease during 1907 and 1908, as compared with former inter-epidemic periods, was more general.

The following table shows the periods of the year and the localities in which deaths from Measles occurred, and also the ages at death.

The number of deaths from Measles during each of the preceding ten years, 1899-1908, has been as follows:—321, 150, 473, 334, 132, 696, 247, 586, 291 and 259.

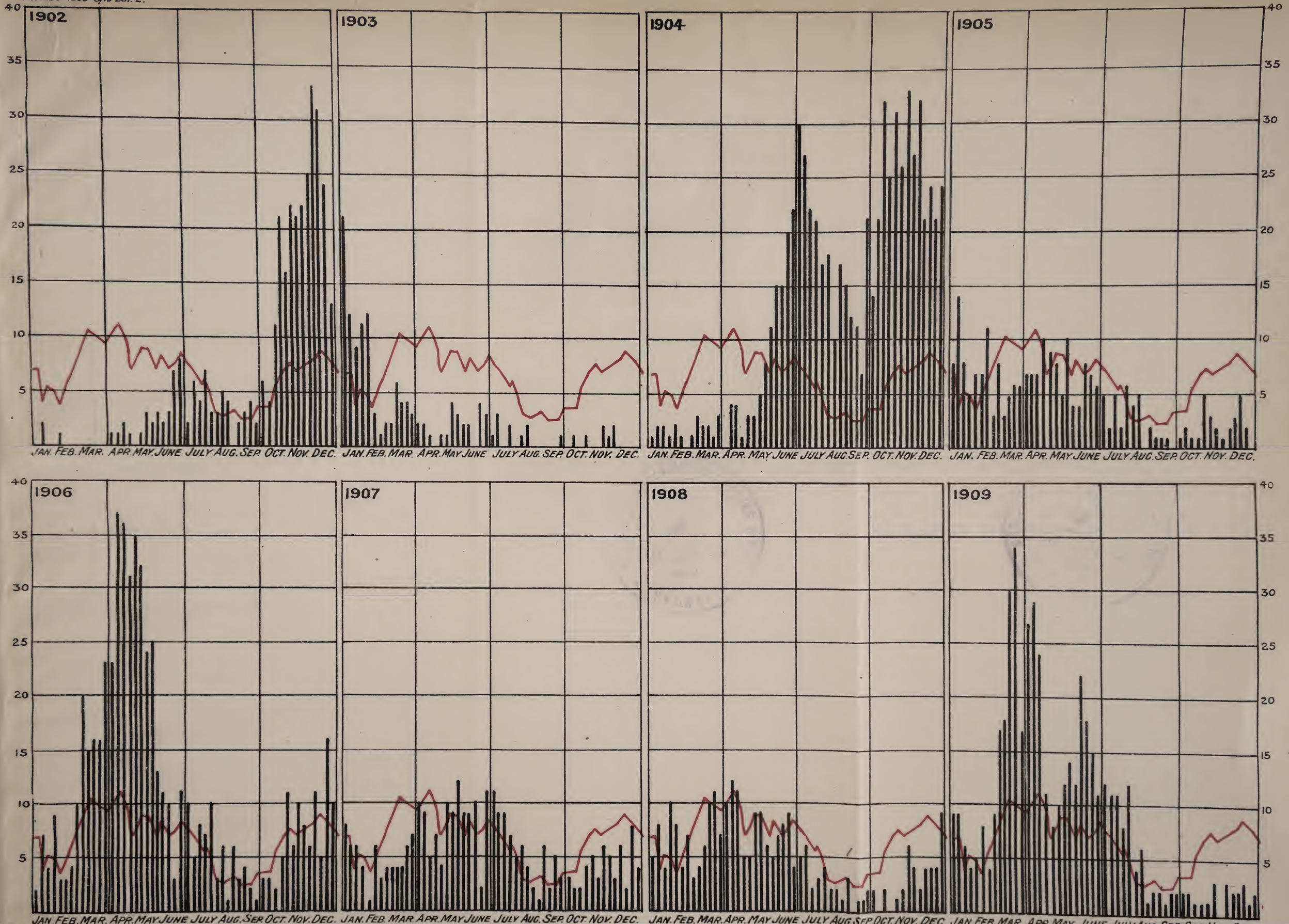
DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	16	7	9	25	6	7	...	...	31	39	70
Exchange	8	12	8	12	3	5	...	...	19	29	48
Abercromby	2	4	4	3	...	2	...	...	6	9	15
Everton	23	22	27	31	10	5	5	4	65	62	127
Kirkdale	12	9	7	9	4	3	3	3	26	24	50
West Derby (West)	15	11	12	7	3	3	2	2	32	23	55
Toxteth	5	2	15	20	6	5	3	...	29	27	56
Walton	4	3	8	4	2	2	...	...	14	9	23
West Derby (East)	3	...	3	3	...	1	1	...	7	4	11
Wavertree	...	...	1	1	1	1	...	...	2	2	4
Sefton Park	...	...	...	1	1	1	...	...	1	2	3
(late Toxteth Rural) Garston	1	...	2	...	...	2	...	...	3	2	5
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	2	1	...	...	1	...	...	1	3	4
City	89	72	97	116	36	38	14	9	236	235	471

Ages at Death.

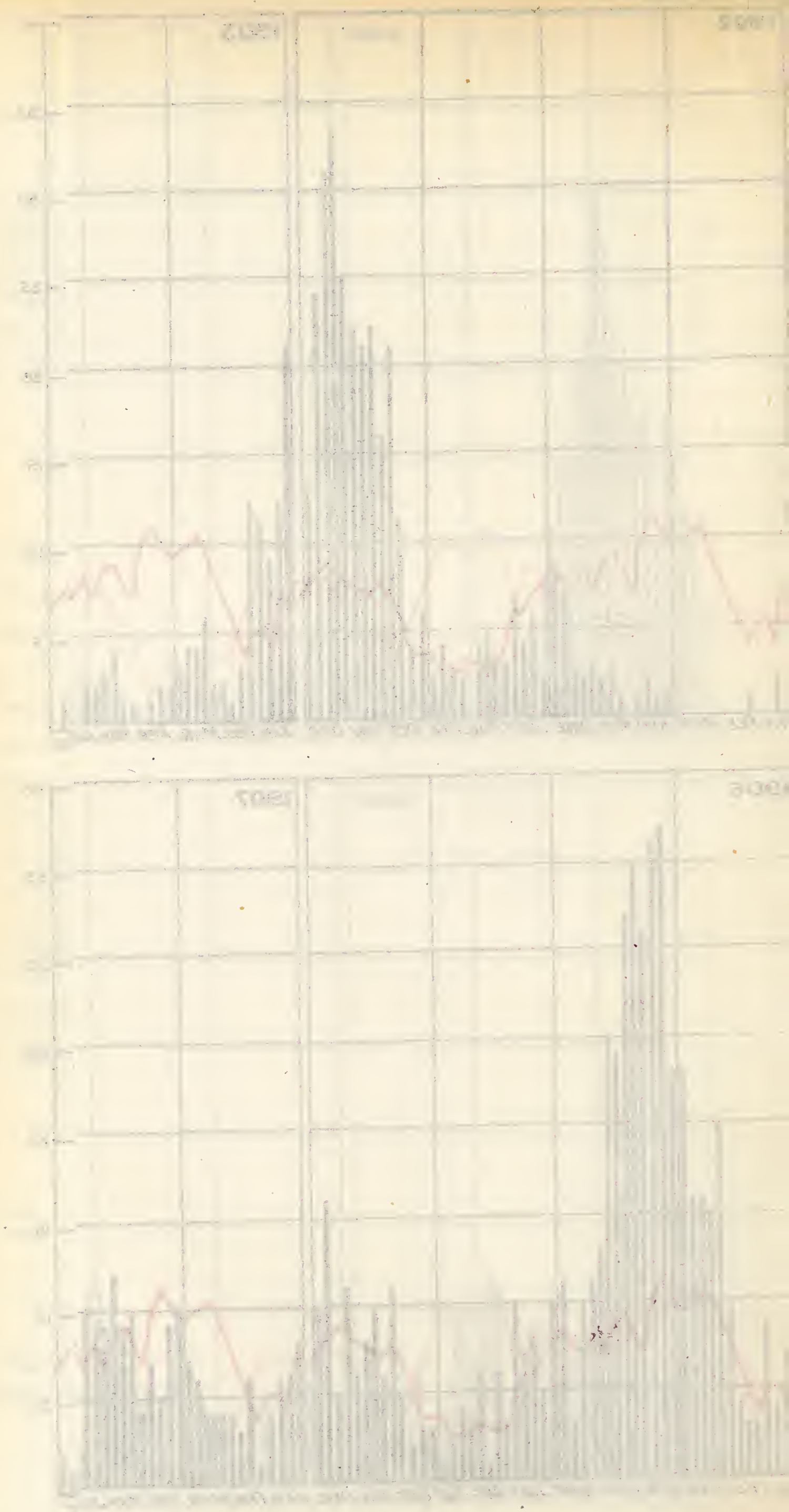
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
108	202	84	38	15	23	...	...	1	...	...	...	471

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

M.18629·1500·5/10 Est. E.



The Black Columns indicate the Number of Deaths from Measles during each week of the Years 1902 to 1909.
The Line in the Diagram for each Year represents the Weekly Average No. of Deaths in the 10 Years 1900–1909.



WHOOPING-COUGH.

Whooping-cough, which had been prevalent during the preceding year, showed a considerable decline during 1909. This disease is one of the most distressing and painful causes of death in very early life; a large number of deaths certified to be primarily due to diseases of the lungs are found on inquiry to have originated in whooping-cough, the great majority of the deaths occurring below two years of age, and more than one-third below twelve months of age. It is plain from this circumstance that isolation of the infected infant in hospital presents many difficulties, similar in character to those which arise in the case of Measles. In a large proportion of cases the patient would have to be accompanied by the mother, whilst the period of detention in hospital would in the majority of cases be protracted. During last year 228 deaths were directly attributed to whooping-cough, but this figure is by no means a complete representation of the mischief caused by it.

Notwithstanding the difficulties in the way, isolation for a limited number of cases has been found, and some lessening of this disease may be expected with confidence. Experience has repeatedly shown that the introduction of a case of whooping-cough into a court has resulted in the spread of the infection to practically the whole of the infant population in that court.

The following table shows the periods of the year and the localities in which deaths from Whooping-cough occurred, and also the ages at death.

The number of deaths from Whooping-cough during each of the preceding ten years, 1899-1908, has been as follows:—314, 538, 166, 407, 318, 426, 151, 362, 324 and 346.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	1	2	2	5	3	...	3	7	9	14	23
Exchange	3	2	...	1	1	1	1	5	5	9	14
Abercromby	3	2	1	3	...	...	1	...	5	5	10
Everton	6	13	8	12	...	1	4	5	18	31	49
Kirkdale	3	7	3	1	1	1	2	2	9	11	20
West Derby (West)	9	7	1	2	...	1	2	5	12	15	27
Toxteth	6	9	5	7	...	2	2	1	13	19	32
Walton	2	5	2	2	2	...	3	3	9	10	19
West Derby (East)	3	2	3	5	1	1	2	4	9	12	21
Wavertree	...	1	1	...	...	1	1	4	2	6	8
Sefton Park (late Toxteth Rural).	...	1	...	...	...	...	1	...	1	1	2
Garston	...	...	...	...	...	...	...	...	...	...	...
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	2	...	...	...	1	...	...	...	3	3
City	36	53	26	38	8	9	22	36	92	136	228

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
82	80	29	21	8	8	...	...	...	...	...	...	228

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

DIPHTHERIA.

Deaths from Diphtheria attained their maximum during the first quarter of the year. Appended is a table showing the periods of the year and the localities in which the deaths from Diphtheria occurred, and also the ages at death.

The number of deaths during each of the preceding ten years has been as follows:—192, 143, 158, 200, 153, 181, 138, 137, 95 and 124.

DISTRICTS.	Quarters.								Year		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	2	3	...	...	1	...	3	1	6	4	10
Exchange	1	...	...	...	1	...	...	...	2	...	2
Abercromby	...	2	1	...	...	...	1	1	2	3	5
Everton	6	...	2	1	2	...	4	2	14	3	17
Kirkdale	2	3	2	1	...	1	1	...	5	5	10
West Derby (West)	5	5	2	3	3	...	...	2	10	10	20
Toxteth	2	1	3	...	...	3	4	1	9	5	14
Walton	1	1	...	1	3	2	1	...	5	4	9
West Derby (East)	1	1	2	2	1	...	3	1	7	4	11
Wavertree	...	1	...	...	1	2	...	1	1	4	5
Sefton Park (late Toxteth Rural).	1	...	...	1	1	...	...	...	2	1	3
Garston	1	1	1	...	1	1	...	1	3	3	6
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	...	...	...	...	...	...	...	...	...	...
City	22	18	13	9	14	9	17	10	66	46	112

Ages at Death

Under 1 year.	1	2—	3—	4—	5—	10—	15—	20—	30	40—	50	60—	All Ages.
8	18	19	16	11	34	4	...	2	...	...	...	...	112

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

CROUP.

The following table shows the periods of the year and the localities in which deaths attributed to Croup occurred, and also the ages at death. Three of the deaths were attributed to Membranous Croup, and seven to Croup.

The number of deaths during each of the preceding ten years has been as follows:— 50, 40, 51, 41, 24, 33, 37, 24, 22 and 22.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	...	...	...	...	...	...	...	...	...	...	...
Exchange	1	...	...	...	...	...	...	...	1	...	1
Abercromby	...	1	1	...	...	...	...	...	1	1	2
Everton	1	...	...	...	1	...	1	...	3	...	3
Kirkdale	...	...	...	...	1	...	...	...	1	...	1
West Derby (West)	...	...	1	...	...	...	...	...	1	...	1
Toxteth	...	1	...	...	...	...	...	...	...	1	1
Walton	...	...	...	...	...	...	...	...	...	...	...
West Derby (East)	...	...	...	...	...	...	...	...	...	...	...
Wavertree	...	...	...	...	...	...	1	...	1	...	1
Sefton Park (late Toxteth Rural).	...	...	...	...	...	...	...	...	...	...	...
Garston	...	...	...	...	...	...	...	...	...	...	...
Fazakerley	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	...	...	...	...	...	...	...	...	...	...
City	2	2	2	...	2	...	2	...	8	2	10

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
1	3	2	2	1	1	...	...	...	...	...	...	10

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

ZYMOTIC DIARRHŒA.

Zymotic Diarrhœa is one of the most fatal diseases of infants in this City; it is by no means confined to infancy, but during 1909, as in preceding years, nearly three-fourths of the total number of deaths were of infants under twelve months old. It is most satisfactory to be able to again record a very marked decline in this form of disease, a result no doubt due partly to the low temperature and amount of rain in the early months of the summer, as well as to the increased municipal effort to lessen the prevalence of the disease. The disease did not commence to figure prominently in the mortality returns until a later period than usual, namely, the end of July, and continued until the end of October. Over 500 deaths were registered from it, which represents a lower proportion to the population than has been recorded in any previous year.

Investigation proves incontestably that the deaths of infants from this cause are closely associated with the method of feeding, putrefying food being the medium by which the specific poison is commonly introduced. The deaths amongst children under three months of age, either wholly or partially fed on artificial foods, are fifteen times as great as they are amongst an equal number of infants fed upon breast milk; *e.g.*, investigation has tended to prove that, out of every 1,000 infants under three months of age, naturally fed upon breast milk alone, 20 die of autumnal choleraic disease; but if the same number of infants, at the same age, are artificially fed, then, instead of 20 dying, as many as 300 will die from this cause. It is mainly with a view to meet this excessive mortality that sterilized milk depôts have been established, to ensure a supply of food for infants which is bacteria-free, and which can be given without any exposure to sources of contamination. (See also pp. 18 and 266.)

The connection between the meteorological conditions and the prevalence of zymotic diarrhœa during the third quarter of the year, is well shown in the following diagrams.

These four diagrams give the daily variations of the rainfall and the mean temperature of the air, during the months of June to September, and the daily deaths from zymotic diarrhœa during July, August, and September, for the years 1906, 7, 8 and 9, October being included in the three latter years.

In comparing the years 1907, 1908, and 1909 with the year 1906 it will be seen that the mean temperature in the latter frequently rose far above the 20 years' average, and remained so for several days together. It seldom fell below the average. The rainfall during the year 1906 was scanty. The summer and autumn of that year was characterised by severe attacks of diarrhœa. On the other hand, the mean temperature during the years 1907, 1908 and 1909 was usually below the average, and rarely rose above it, and then only for short intervals of a day or so. The amount of rain which fell was much greater. These conditions were associated with a death-rate from diarrhœa which was about one-half of that which occurred in 1906.

The numbers of deaths during each of the preceding ten years have been as follows:—1,158, 900, 1,269, 611, 657, 1,785, 960, 1,298, 544 and 630.

Provision was made during the year for the treatment at the Fazakerley Hospital of a limited number of infants suffering from infantile diarrhœa. See p. 266 (Hospitals).

Valuable service has been rendered in previous years by the authorities of the Royal Infirmary, Stanley Hospital, David Lewis Northern Hospital, Belmont Road Hospital, and Children's Infirmary in receiving a considerable number of patients, all of them infants, suffering from this disease. In some instances the cost was defrayed by the Corporation.

YEAR 1906.

18927-1500-6/10-EST. E.E.

THE BLACK LINE INDICATES THE MEAN DAILY TEMPERATURE. THE DOTTED LINE INDICATES THE AVERAGE FOR THE LAST 20 YEARS.

70°

60°

50°

0·75"

DAILY RAINFALL IN INCHES.

30

20

10

DAILY RECORD OF DEATHS FROM DIARRHŒA.

JUNE JULY AUGUST SEPTEMBER

YEAR 1907.

THE BLACK LINE INDICATES THE MEAN DAILY TEMPERATURE. THE DOTTED LINE INDICATES THE AVERAGE FOR THE LAST 20 YEARS.

70°

60° 1·20

50° 1·00

40° 0·70

0·50

0·23

DAILY RAINFALL IN INCHES.

DAILY RECORD OF DEATHS FROM DIARRHŒA.

JUNE JULY AUGUST SEPTEMBER OCTOBER

YEAR 1908.

THE BLACK LINE INDICATES THE MEAN DAILY TEMPERATURE. THE DOTTED LINE INDICATES THE AVERAGE FOR THE LAST 20 YEARS.

70° 1·25

60° 0·75

50° 0·50

0·25

DAILY RAINFALL IN INCHES.

30

20

DAILY RECORD OF DEATHS FROM DIARRHŒA.

10

JUNE JULY AUGUST SEPTEMBER OCTOBER

YEAR 1909.

THE BLACK LINE INDICATES THE MEAN DAILY TEMPERATURE. THE DOTTED LINE INDICATES THE AVERAGE FOR THE LAST 20 YEARS.

70° 1·25

60° 1·00

50° 0·75

40° 0·50

0·25

DAILY RAINFALL IN INCHES.

DAILY RECORD OF DEATHS FROM DIARRHŒA.

JUNE JULY AUGUST SEPTEMBER OCTOBER.

POMONA COLLEGE
LIBRARY

DEATHS FROM DIARRHŒA.

The following table gives the Districts in which fatal diarrhœa occurred, the seasons in which it took place and the ages of the patients. It will be seen that the greatest fatality was amongst infants under 12 months of age:—

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	2	3	3	3	33	27	7	8	45	41	86
Exchange	1	1	1	2	21	24	3	8	26	35	61
Abercromby	...	2	...	...	10	8	3	1	13	11	24
Everton	3	...	7	6	36	33	7	12	53	51	104
Kirkdale	1	...	...	2	24	21	4	9	29	32	61
West Derby (West)	3	3	5	3	15	12	3	3	26	21	47
Toxteth	4	1	2	1	27	27	6	2	39	31	70
Walton	...	2	1	1	10	4	2	4	13	11	24
West Derby (East)	1	...	...	1	4	4	2	...	7	5	12
Wavertree	2	1	...	...	2	2	1	...	5	3	8
Sefton Park (late Toxteth Rural)	...	...	1	...	1	3	2	...	4	3	7
Garston ...	...	...	...	...	2	1	...	2	2	3	5
Fazakerley ...	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	...	1	2	...	1	1	...	2	3	5
City	17	13	21	21	185	167	41	49	264	250	514

Ages at Death.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
313	137	22	11	2	4	...	...	...	1	1	1	22	514

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

List of Streets in the City wherein Three or more Deaths from Diarrhœa occurred during the year 1909.

Streets.	No. of Deaths.
Arlington ...	4
Athol	4
Beaufort	6
Clare	4
Field	4
Gerard	3
Hankin	3
Hornby	4
Kirby	3
Langsdale	4
Leyden	3
Mann	5
Mount Vernon View	3
Pugin	4
Robsart	3
Stanley Road	4
Travers	3
Windsor	3

In arranging the foregoing list of streets, all deaths occurring in hospitals have been transferred to the streets from whence the patients were removed.

OTHER ZYMOTICS.

The following table indicates the localities in which deaths from other forms of zymotic disease occurred during the year:—

DISTRICTS.	Influenza.		Erysipelas.		Syphilis.		Rheumatic Fever.		Puerperal Fever.		Other Zymotics.		Year.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	1	3	...	...	2	...	1	1	...	1	...	1	10
Exchange	...	1	2	1	4	7	...	...	...	1	1	...	17
Abercromby	4	2	...	1	1	2	1	2	...	1	2	1	17
Everton	5	7	1	2	6	10	4	7	...	...	6	...	48
Kirkdale	8	5	3	1	4	5	2	2	...	4	2	1	37
West Derby (West) ..	3	3	4	...	5	2	4	...	...	3	3	1	28
Toxteth	5	8	...	...	3	...	2	2	...	3	5	2	30
Walton	3	1	1	3	2	2	...	1	...	1	1	...	15
West Derby (East)...	3	4	1	1	2	2	1	1	...	3	1	4	23
Wavertree	2	2	1	...	1	...	...	...	...	3	...	...	9
Sefton Park..... (late Toxteth Rural)	1	6	1	...	...	1	...	...	...	...	1	...	10
Garston	2	...	...	1	2	...	...	...	...	1	...	...	6
Fazakerley	...	...	1	...	...	...	...	1	...	...	...	...	2
Hospitals(Residences outside the City)..	2	3	3	1	1	1	...	...	...	2	6	1	20
City	39	45	18	11	33	32	15	17	...	23	28	11	272

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

THE FOLLOWING TABLE SHOWING THE ANNUAL AVERAGE NUMBER OF DEATHS FROM SEVEN OF THE PRINCIPAL ZYMOTIC DISEASES DURING EACH OF THE LAST FOUR DECENNIAL PERIODS, IS INTERESTING AND INSTRUCTIVE. THE DECLINE IN THE MORE FORMIDABLE FORMS OF INFECTIOUS DISEASES IS VERY MARKED.

Years.	Small Pox.	Typhus.	Scarlet Fever.	Measles.	Whooping Cough.	Diarrhœa.	Typhoid.
1866 to 1875	237·4	652·8	789·4	425·7	496·8	995·3	† —
1876 to 1885	90·8	238·0	421·2	517·8	472·3	658·4	126·4
1886 to 1895	8·8	37·1	257·5	399·5	322·4	600·6	153·0
*1896 to 1905	19·5	25·1	201·3	329·0	330·4	1,051·9	134·4
1906-9	·2	10·0	185·2	394·2	311·5	742·5	67·5

* Including extended city area.

† Records not available.

ANNUAL AVERAGE NUMBER OF DEATHS FROM SEVEN OF THE PRINCIPAL ZYMOTIC DISEASES DURING EACH OF THE LAST FOUR DECENNIAL PERIODS, DISTINGUISHING THOSE OF PERSONS ABOVE AND BELOW FIVE YEARS OF AGE.

Years.	Smallpox.		Typhus.		Scarlet Fever.		Measles.		Whooping Cough.		Diarrhœa.		Typhoid.	
	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.
1866 to 1875	141·7	95·7	*...	*...	187·7	601·7	14·4	411·3	9·9	486·9	105·7	889·6	* —	* —
1876 to 1885	62·5	28·3	†190·0	† 5·1	137·0	284·2	35·4	482·4	18·6	453·7	61·9	596·5	†110·3	† 12·1
1886 to 1895	6·2	2·6	36·2	·9	87·6	169·9	28·3	371·2	15·1	307·3	60·2	540·4	142·0	11·0
**1896 to 1905	14·5	5·0	24·2	·9	61·7	139·6	17·1	311·9	11·9	318·5	53·6	1,008·3	128·4	6·0
1906-9	·2	—	9·5	·5	64·5	120·7	21·2	373·0	11·2	300·3	28·5	714·0	65·5	2·2

* During these years the ages at death from Typhus and Typhoid were not differentiated.

† During the six years, 1880-1885.

** Including extended City Area.

The following table shows the number of deaths, the annual average death-rate per 100,000 of the population from the undermentioned forms of disease during the last five decades 1856 to 1905, and during the last four years 1906-9 :—

DISEASE.		1856 to 1865, Average Population 443,938.	1866 to 1875, Average Population 493,405.	1876 to 1885, Average Population 538,651.	1886 to 1895, Average Population 536,974.	1896† to 1905, Average Population 691,351.	1906-9, Average Population 749,721.
Scarlet Fever	Total Deaths.....	5,994	7,894	4,212	2,575	2,013	741
	Rate per 100,000 per annum.	135·0	159·9	78·1	47·9	29·1	24·7
Typhus Fever	Total Deaths.....	7,482	6,528	2,380	371	251	40
	Rate per 100,000 per annum.	168·5	132·2	44·1	6·9	3·6	1·3
Typhoid Fever	Total Deaths.....	*	*	1,264	1,530	1,344	271
	Rate per 100,000 per annum.			21·5	28·4	19·3	9·0
Measles	Total Deaths.....	3,215	4,257	5,178	3,995	3,290	1,577
	Rate per 100,000 per annum.	72·4	86·2	96·1	74·3	47·5	52·5
Whooping Cough	Total Deaths.....	4,779	4,968	4,723	3,224	3,304	1,246
	Rate per 100,000 per annum.	107·6	100·6	87·6	60·0	47·7	41·5
Smallpox	Total Deaths.....	1,673	2,374	908	88	195	1
	Rate per 100,000 per annum.	37·6	48·1	16·8	1·6	2·8	·003
Phthisis	Total Deaths.....	15,572	16,476	13,754	11,436	12,632	4,526
	Rate per 100,000 per annum.	350·7	333·9	255·3	212·9	182·7	150·9

† City Boundaries extended in 1895. * Records not available.

TUBERCULOSIS.

Tuberculosis in its various forms has for many years been known to be associated with insanitary surroundings and bad conditions of life. Dwellings in courts and alleys—often damp, dark, dirty, and so constructed that a foul and fœtid atmosphere takes the place of sunlight and pure air—are the breeding places for tuberculosis, and conditions approximating to these, whether of the home, the school, the workshop, or place of business, favour its growth and spread, and it is with conditions such as these that its prevalence is notorious. Poverty, intemperance, ill-feeding, prejudicial habits, occupation, anything in fact which tends to debilitate or to lower the constitution increases susceptibility to the disease. A minute organism, which at certain stages of the disease is given off by the consumptive patient, usually from the lungs, and under the conditions described, is capable of transmitting the disease to the healthy.

It is also capable of being transmitted in quite another way, namely, from animals to man, more especially through the milk of a tuberculous cow; indeed, some eminent experts regard this latter as of even more importance as a source of infection than the communicability from person to person; the safest course, however, is to recognise the danger of each. It is the close, dark, dirty, ill-ventilated and over-crowded cowshed which favours the disease in the cow, just as similar surroundings favour it in the human being.

The liability of transmission from person to person is very variable, and is affected by various conditions; in early stages of phthisis and in tuberculosis of internal organs other than the lungs the risk is small, if any, but when there is copious expectoration large quantities of bacilli may be discharged, which may be dispersed into the atmosphere in the act of coughing or sneezing, and inhaled or swallowed by others. A careless patient in bad surroundings may easily become a source of infection.

The susceptibility of the individual who inhales or swallows the bacilli varies; constitutional predisposition, the habits, the occupation, the intemperance of the exposed person may prepare the way for it. In numberless cases the likelihood is that the bacillus is swallowed or inhaled without any ill effect.

It will be seen, therefore, that the consumptive patient must not be always and under all circumstances regarded as a source of danger to others.

Some interesting figures are available in reference to the more recent history of phthisis in Liverpool. In the year 1895 the City boundaries were extended. The rate of phthisis mortality amongst that population during that year was 1·9 per thousand. It has steadily declined since that date, and last year was 1·3 If the phthisis rate of 1895 had remained stationary and had not dropped as it has done there would have been in the interval approximately one thousand more deaths from phthisis than actually did occur.

For many years the Housing and Insanitary Property Committee has been engaged in demolishing insanitary areas of the worst description in the City, and replacing them to a limited extent by sanitary dwellings upon the same site, the balance of cottage building being left to private enterprise, and taking place in the suburbs.

Under that Committee's control there are at the present time some 2,200 dwellings occupied by 8,075 people. These dwellings are erected practically upon the sites of the insanitary areas which they replaced, and are reserved for the people dispossessed by the action of the Corporation from condemned insanitary dwellings, condemned cellar dwellings, and so forth, that is to say, for the poorest of the poor, who, in most cases, cannot afford to pay the full market rentals, the balance of the rentals being made up out of the rates. These people constitute, probably, not less than 80 per cent. of the total inhabitants, the most material alteration in their circumstances being the change from a dwelling which was unfit for human habitation to one that is.

When the insanitary areas were condemned the Medical Officer of Health called attention to the great amount of phthisis and diseases of the lungs amongst the occupiers of those dwellings. The phthisis mortality rate in the Corporation dwellings taken as a whole, notwithstanding the history of the occupiers, was, during 1908-09, 1·9 per thousand, very considerably below that of the districts in which the dwellings are situated. No practical sanitarian would suggest that if, instead of spending the money in demolishing the slums, purchasing the sites, and erecting the dwellings, it had been spent in providing sanatoria

and in removing and maintaining the diseased people therein, that the results would have been at all comparable either in benefit to the City or to the inmates of the dwellings themselves.

In Liverpool, as in other parts of the country, the decline in the phthisis rate has been more marked amongst females than amongst males. Whether the male be more susceptible than the female or not, there is no doubt that the occupations and the habits of males tend to expose them to greater liability than women. Dusty trades, those involving prolonged exposure, the vicissitudes of sea life, varying and precarious employment, and the number of broken-down men coming to the City in search of employment, explain the greater incidence of phthisis upon males; moreover, it is generally acknowledged that on the whole men are less temperate than women. On the other hand, the woman is more in the home, and the improvements which have taken place in regard to housing benefit the female to a larger extent than the male.

Forms of tuberculosis other than phthisis may be regarded as practically non-infectious. The large majority of the cases of phthisis come under the same category, whilst the remainder are infectious only under circumstances favourable to infection, and have little, if any, tendency to spread where reasonable precautions can be adopted. For example, in the great Consumption Hospitals of the Country, notwithstanding the constant exposure of the attendants on the sick, infection is extremely rare. The same observation applies to the results, so far as they can be ascertained, of the Liverpool Hospital for Consumption, and the Poor Law Institutions in which large numbers of consumptive patients are treated.

All of these experiences confirm the view that it is the vicious domestic or living conditions which lie at the root of the evil, and it is against these that sanitary effort has been directed. A large and suitably trained and qualified sanitary staff has for years been at work to ameliorate these conditions.

To summarise the principal efforts made to combat tuberculosis would be to summarise the whole of the great sanitary operations which have been carried out with such good results for the extended period already referred to.

But in recent years measures of a more specific kind have been taken against tuberculosis; for example, since the year 1899 many thousands of cards of instruction have been distributed, giving advice to consumptives and those who live with them, as to the ordinary regulation of their lives. Early in 1901 a voluntary system of notification of cases of consumption and other forms of tuberculosis was inaugurated, a special form was used for these notifications, the object being to ascertain as far as possible particulars of cases in which some exceptional action on the part of the Health Department could be taken with advantage. The ordinary notification fee has been paid in such cases.

At the time when this system was commenced the question had been discussed as to the advisability of seeking powers to include tuberculosis amongst the notifiable diseases. In view, however, of the divergence of tuberculosis in essential particulars from the ordinary forms of infectious disease it was plain at that time that compulsion would be regarded with disfavour, and sufficient material for the education of public opinion upon the matter was not available.

Eight years' experience of the voluntary system of notification and ten years' experience of education by the distribution of cards of instruction and in other ways have not been without their effect. This would suggest that the voluntary system in Liverpool has grown in favour, and has probably resulted in bringing to the knowledge of the Health Department most of the cases in which interference was necessary. Furthermore, these preliminary measures facilitated the work relating to the compulsory notification of pauper consumptives which will facilitate the application of remedial measures.

More recently, the system which is now evolving of the medical inspection of school children will open up further avenues of action.

It has been noted that poverty and its train of evils hamper sanitation in Liverpool. It is probable that there is a larger amount of poverty, apart from pauperism, in Liverpool than in other large cities.

It is in Liverpool that a larger proportion of the total deaths takes place in Workhouses and in Public Institutions than in other large towns, and a further sidelight is thrown upon the struggling poverty by the hostility to measures having for their object the protection of

children from the hardship of, for them, excessive labour; for example, objections were raised to the regulations under the Employment of Children Act, on account of the loss to the family income of the earnings of the little children, notwithstanding that the employment was seriously and obviously detrimental to the interests of the children. Considerations such as these indicate the nature of the additional difficulties arising from poverty.

For many years the Dispensaries have given valuable aid in the amelioration of the conditions of the consumptive, and excellent work has also been carried out at the Out-Patient Department of the Liverpool Consumption Hospital. None of these Institutions, however, is exactly comparable with the French Tuberculosis Dispensaries, as at these latter places material aid, food and clothing are given as well as medical guidance.

The Out-Patient Departments of the David Lewis Northern Hospital, of the Stanley Hospital, the Royal Southern Hospital, and the Consumption Hospital are very valuable, and there is little doubt that the additions to the Out-Patient Department facilities now projected at the Royal Infirmary will serve a wide area.

As already stated, the evidence is conclusive that attacks of phthisis in the vast number of cases and under ordinary circumstances are recovered from, but the more favourable the conditions, the more likely is this result to happen. Comfortable surroundings in a pure atmosphere, abundance of food, regular living, warmth, suitable clothing, rest, with carefully graduated exercise or agreeable recreation have, as might be supposed, an extremely beneficial effect upon the consumptive, in most cases ameliorating his condition, and in many, leading, if not to complete recovery, at all events to a cessation of the destructive processes. These results follow more conspicuously when the patient is removed from his bad surroundings in the early stage.

That relapses ensue in a disappointingly large number of cases when the patient returns to his former surroundings or even to his daily work, has perhaps not been sufficiently emphasised, and the too sanguine expectations held out have resulted in disappointment. The necessary length of the treatment has itself proved an obstacle, the breadwinner, knowing that his family are dependent upon others and feeling himself well, being unwilling to prolong his stay long enough to ensure recovery.

Amendment no doubt in varying degree follows the ordinary treatment in an ordinary hospital ward.

It must not be overlooked that the treatment of consumption in hospitals and workhouse infirmaries has for a great number of years, up to a point and with limitations, been a helpful preventive measure, by receiving for longer or shorter periods advanced cases of consumption amongst poor persons, not only giving them a chance of recovery, but taking them from surroundings in which they were a source of danger to others. Although many, perhaps the majority, either left the institutions or remained outside at times when it was most desirable that they should be treated within its walls, yet it is probable that the various Poor Law Institutions have not been without a valuable effect in lessening the dissemination of the disease.

The necessity for a more suitable provision for the isolation of advanced cases of phthisis is a great need. There are numbers of patients in advanced stages of phthisis who are above the pauper class, but yet are not and cannot be suitably attended to at their homes; for these no provision exists, and by remaining at their homes the probability is that their end is hastened, whilst at the same time they are a source of danger to others.

These facts again raise the question as to whether or no pauper consumptives, or indeed any consumptives whose reckless mode of life, or whose general surroundings are such as to render them a danger to those with whom they associate, should not be compulsorily detained in a curative institution for the purpose of isolation for the same reason that the law now authorises the detention of persons suffering from a dangerous infectious disease. It is not improbable that such powers would require special legislation, but they would discriminate between the consumptive who is harmless and the consumptive who is dangerous.

The investigation of many experts of the highest eminence have led them to the conclusion that tuberculosis is at least as frequently introduced into the system by swallowing as by inhalation; be this as it may, constant and unceasing efforts have been, and are, made to ensure that the milk supplied to the City shall be free from tubercle. This can only be assured by keeping cows under healthy conditions. (See pages 181-185.)

The cases referred for investigation to the Sanitary Department during the year 1909 were 4,700, 917 being voluntary notifications and 3,783 received under the Public Health (Tuberculosis) Regulations, 1908.

Of the total number, 3,048 were males and 1,652 females.

In all cases a card of instruction is left, and the usual disinfection of the sick room and bedding is carried out on the removal or death of the patient. Disinfection of the patient's room is also done during the currency of known cases when desired.

From time to time the Out-Patient Departments of the various Hospitals are also furnished with supplies of cards of instruction.

ANALYSIS OF NOTIFICATIONS INVESTIGATED.

Duplicates	992
Tubercular disease other than Pulmonary Tuberculosis	373
Lodging-house cases	438
Deaths	634
In Hospital at time of first visit	950
Wrong addresses, removals, &c.	203
At home at time of first visit	818
Inmates of H.M. Prison, also inmates of Workhouses removed to Phthisis Wards, together with a return of persons of no fixed address	292
	4,700

With regard to the duplicate notifications the recorded number, 992, although nearly 22 per cent. of the total cases notified, is probably understated and can be attributed to the fact that three or more notifications may be received in respect to the same patient, and should a patient seek the advice or shelter of two or more Poor Law Institutions, the same routine in respect of notification is repeated.

There are numerous instances of cases being notified seven, eight, nine and as often as twelve and thirteen times.

DISTRIBUTION OF CASES.

In the following table the total number of notifications are allocated to the respective districts in which the patient resided at the time of notification.

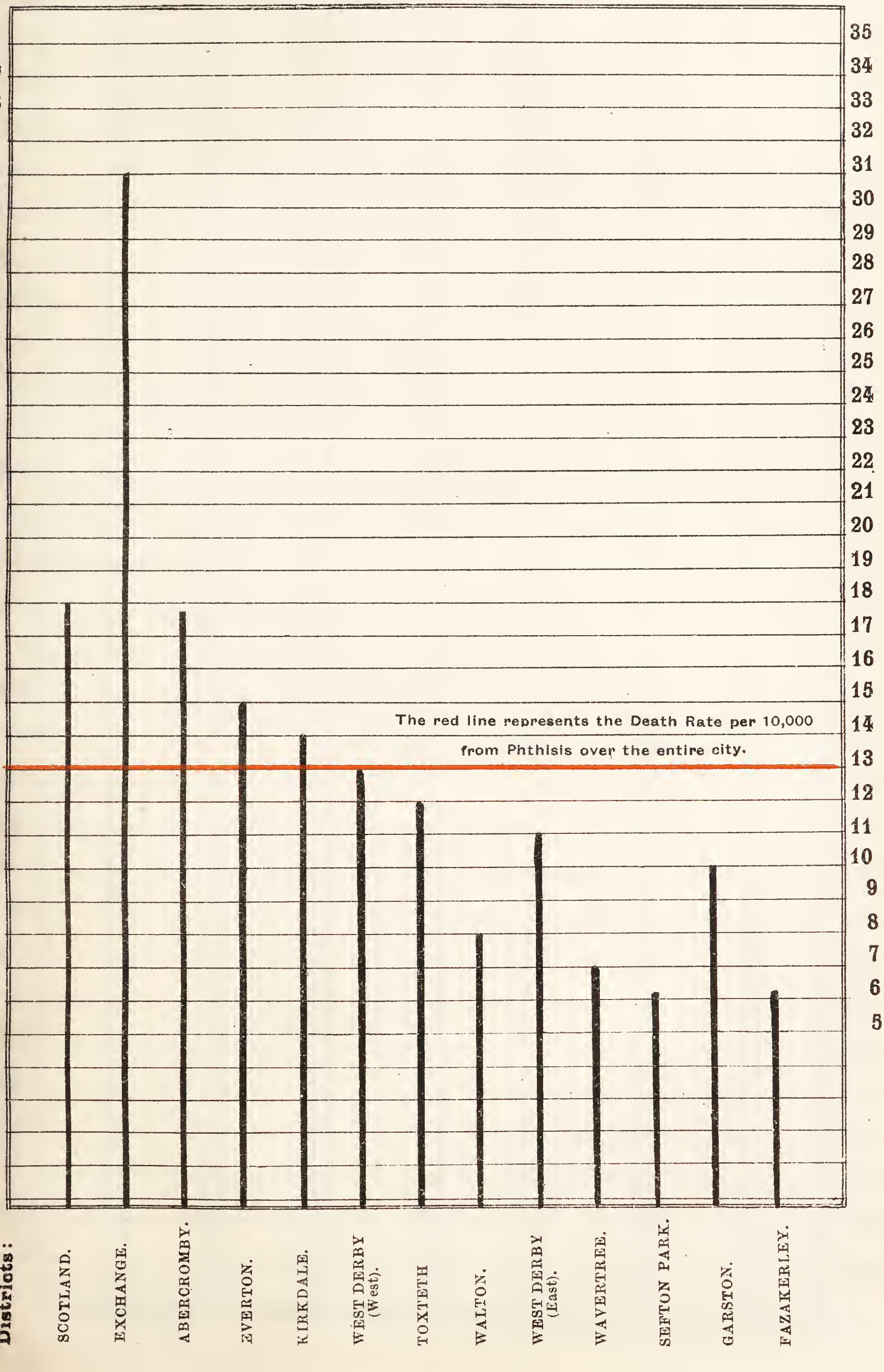
District.	Poor Law.	Voluntary.	Total.
Scotland	469	86	555
Exchange	602	76	678
Abercromby	431	114	545
Everton	823	112	935
Kirkdale	224	62	286
West Derby, West	183	112	295
Toxteth	401	247	648
Walton	152	48	200
West Derby, East	90	25	115
Wavertree	52	24	76
Sefton Park	10	9	19
Garston	50	2	52
Fazakerley	4	—	4
No Addresses given	292	—	292
	3,783	917	4,700

A considerable incidence of phthisis in the Exchange Division will be noticed, and it is necessary to explain that this district contains a large number of common lodging-houses of various descriptions, many of which are the homes, and the only homes, of broken-down and indigent people, often coming from a distance in expectation of finding work at the docks. It is from these places that many of the sick people are removed to workhouses and hospitals, and although they cannot be regarded as actual residents, yet they tend to swell the mortality of the district.

CITY OF LIVERPOOL.

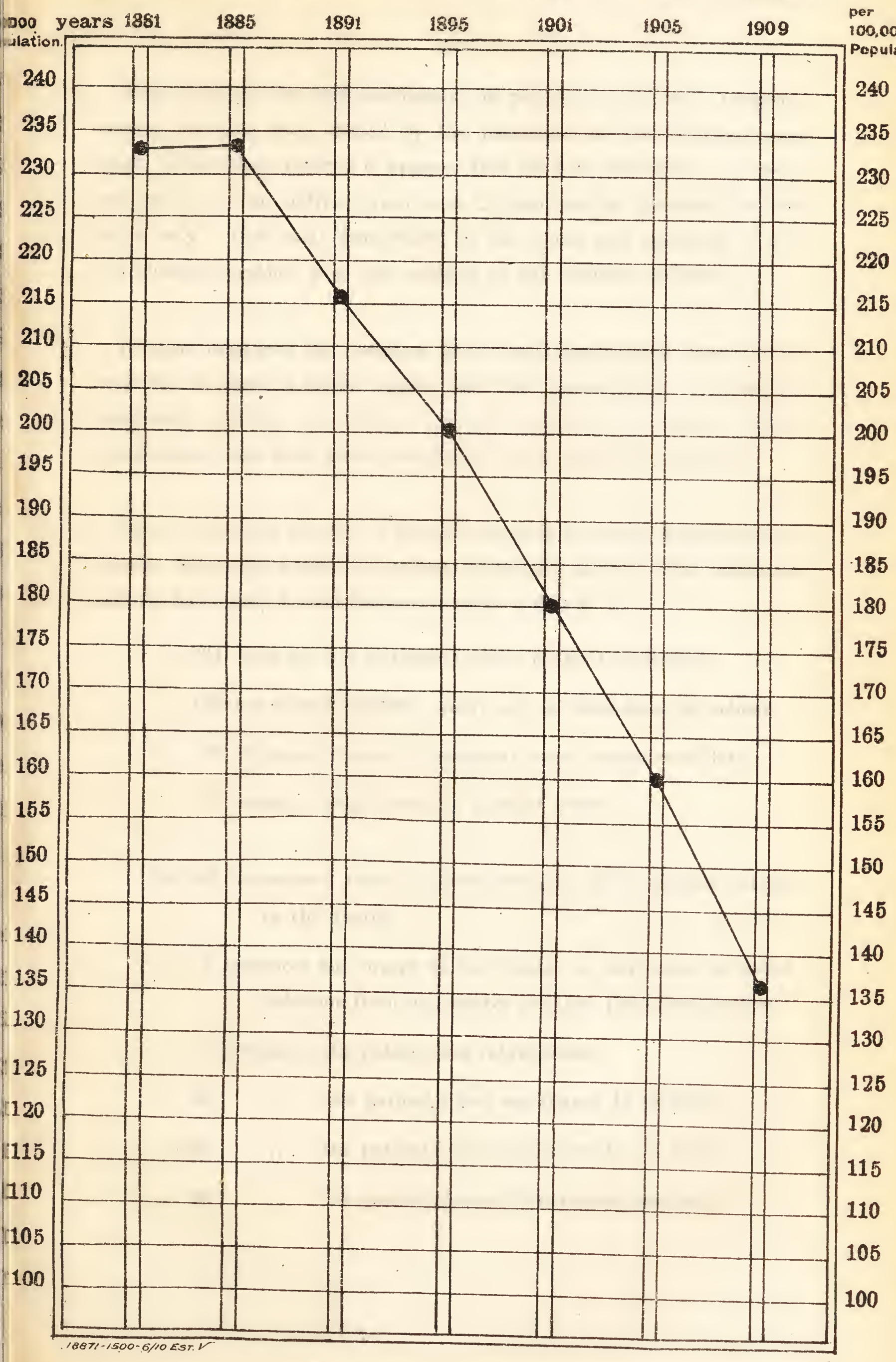
Comparative view of the Death Rate from Phthisis per 10,000 of the Population in the different districts of the City during the year 1909.

M 18869-1500. 6/10 Est. Z

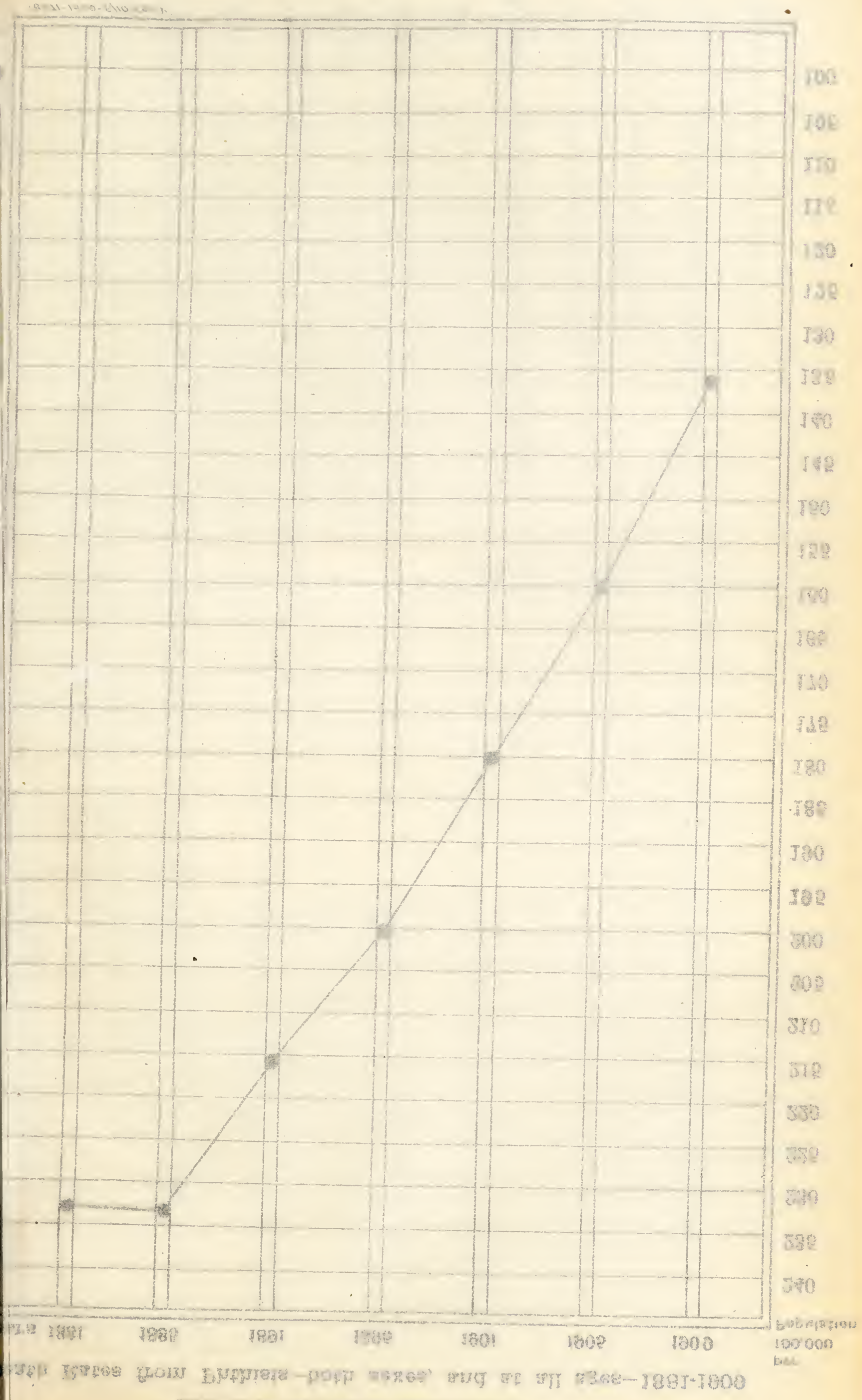


CITY OF LIVERPOOL.

Death Rates from Phthisis—both sexes, and at all ages—1881-1909



18871-1500-6/10 EST. V



CITY OF GLENWOOD

With regard to the 438 notifications of patients in Common Lodging-houses, all have been visited by the Inspectors of the Lodging-house Staff. From their returns it appears that 98 were duplicates, 144 were not known at the address given, and 22 slept on the premises for one night only. The usual disinfection of the rooms and cleansing of the bed clothes, together with the washing of the utensils, followed.

In some instances the premises were found unoccupied, but in the majority of cases it would appear that the patient gave a wrong or temporary address in order to comply with the necessary Parish qualification, and thus secure admission into a particular Hospital.

Some of the facts relative to Home Cases may be briefly summarised as follows, bearing in mind that patients constantly move to other addresses and are lost sight of until the case is again notified:—

234 cases are not at present under medical treatment.

189 are school children, many are in attendance at school.

76 at present reside in insanitary court houses or cellars.

64 occupy a single room in a sublet house.

In 268 instances a record of previous cases of the disease existed in the family.

,, 17 instances the origin of the disease is attributed to direct infection from workmates or other phthisical persons.

,, 76 instances the patient was intemperate.

,, 69 ,, the patient's bed was shared by children

,, 383 ,, the patient's bed was shared by an adult.

,, 38 ,, the patient desires Sanatorium treatment.

Systematic visitation of the Home Cases has been continued throughout the year by two District Sanitary Inspectors, with beneficial results. From the Inspectors' reports, it will be noticed that there is a closer and more willing observance, not only by the patient, but also by the other inmates, of the information contained on the instruction card. This information appears also to have established a belief, especially noticeable in cases which have received the additional educational advantage of Hospital treatment, that the disease can be successfully fought and possibly suppressed.

The increasing number of home cases and necessary clerical work, together with other routine duties discharged by the two officers in their respective districts, does not permit of visits to the home cases oftener than six times in the year. In many instances this is sufficient, but there are cases requiring closer attention.

A reason often given for neglecting to maintain good ventilation, especially at night, is the paucity of the bedding owing to poverty, and for the same reason it does not appear possible to provide separate food utensils for the patient. On the whole cleanliness is fairly well observed, but in many instances it does not amount to scrupulous cleansing of the sick room. It is hoped that as a result of the continual advice and supervision a higher standard of cleanliness will eventually be reached and maintained.

There are instances where the disease appears to be well advanced before the patient seeks medical advice—wage earners are reluctant to give in until unable to follow their employment. Much self denial is exhibited by many men in this respect.

The younger patients object to treatment at the Hospitals, especially Workhouse Hospitals, owing to being closely associated with more

advanced cases. Instances are recorded where the economic drain which the disease has entailed has compelled removal to a smaller house.

A report on the result of the special observations and enquiries relative to 818 of these cases found to be under treatment at home follows:—

The ages of 818 of the patients under special observation at home, together with the percentage in relation to the total number of cases, is shown in the following table:—

Under 15 years.	15 to 30 years.	30 to 50 years.	Over 50 years.
227 or 27·75 %	239 or 29·21 %	287 or 35·08 %	65 or 7·94 %
Average Age 8·63	Average Age 23·8	Average Age 39·45	Average Age 58·00

A number of the patients under 15 years are of school age, and are in attendance at various schools within the City.

The duration of actual sickness ranges from two weeks to six months, although in the majority of cases this pericd was preceded by intermittent illness or indisposition extendng over several years.

776 were born in the City. Of the remaining 42 cases, 9 are foreigners from various European countries, and 33 were born in other towns, but all have been resident in the City for various periods ranging from 6 months to 40 years, as per table.

1 year and under.	6 years and under.	12 years and under.	20 years and under.	30 years and under.	Over 30 years.
5	6	7	18	4	2

CLASS OF DWELLING.

56 or 6·84 per cent. reside in insanitary court houses.

20 ,, 2·44 per cent. occupy insanitary cellar dwellings.

134 ,, 16·38 per cent. occupy apartments in sublet houses, and of these 64, or 47·7 per cent., occupy one room only.

15 ,, 1·83 per cent. occupy two roomed dwellings.

60 ,, 7·33 per cent. occupy three roomed dwellings.

212 ,, 25·91 per cent. occupy four roomed dwellings.

321 ,, 38·01 per cent. occupy six roomed dwellings and upwards.

818

The average number of occupants in each house where there is Phthisis is 6·25 persons.

FAMILY HISTORY.

In 268 instances a definite record of the previous existence of the disease was found.

The relatives affected are as follows :—

Father	Mother.	Sister.	Brother.	Paternal Relative.	Maternal Relative.	Husband.	Wife.	Other Relatives	TOTAL.
69	73	22	29	22	24	13	4	12	268

In 98 of the above cases more than one member of the family had previously suffered from Phthisis.

In 15 cases both parents of the patients had died from the disease.

In the remaining 550 cases there was either no record of Phthisis or no information could be obtained, although careful enquiry was made.

In 17 cases the origin of the disease was attributed to direct infection from workmates and other phthisical persons.

HABITS.

In 15 instances the habits of the patient were found to be dirty and intemperate.

In 61 instances the habits of the occupiers were clean, but the patient was intemperate.

In 3 instances the habits of the patient were found to be dirty, but temperate. (In these cases the re-visits have led to improvement in the condition of cleanliness.)

In 739 remaining instances the habits of the patient and generally of the other occupiers were clean and temperate.

818

OCCUPATIONS OF THE PERSONS TREATED AT HOME.

Artist	1	Charwomen	25
Actor...	1	Coopers	4
Bricklayers	5	Coal Heavers	4
Brushmakers	2	Cap Maker	1
Brass Moulder	1	Cab Driver	1
Brass Finishers	2	Clerks	13
Barmen	2	Carpet Planner	1
Butchers	2	Cardboard Box Makers	2
Billiard Marker	1	Cattle Drovers	2
Blacksmith	1	Cotton Sorter	1
Boiler Scalers	8	Chamois Grounder	1
Boiler Makers	3	Cabinet Maker	1
Bottler	1	Draper	1
Bag Makers...	7	Domestic Servants...	17
Bakers	5	Dock Labourers	46
Bookbinders	2	Decorator	1
Bottle Washer	1	Dressmakers	2
Bill Poster	1	Ex-Soldiers	11
Carters	13	Ex-Naval Seamen	2

OCCUPATIONS.—*Continued.*

Ex-Policemen	...	...	2
Engineers	...	...	2
Errand Boys	...	...	4
Enamellers	...	...	2
Engraver	...	...	1
Electrician	...	...	1
Engine Driver	...	...	1
Fitters	...	...	2
French Polisher	...	...	1
Flour Mill Hands	...	...	3
Feather Picker	...	...	1
Florist	...	...	1
Gardeners	...	...	2
Gasworks Stoker	...	...	1
Housewives	...	...	119
Hawkers	...	...	10
Hairdresser	...	...	1
Hospital Nurses	...	...	2
Iron Worker	...	...	1
Iron Moulder	...	...	1
Insurance Agent	...	...	1
Joiners	...	...	4
Labeller	...	...	1
Labourers	...	...	46
Lint Worker	...	...	1
Laundresses	...	...	6
Midwife	...	...	1
Milk Dealers	...	...	2
Machinist (Iron)	...	...	1
Marine Firemen	...	...	13
Music Teacher	...	...	1
Milliner	...	...	1
Metal Drum Maker	...	...	1
Newsvendor	...	...	1
No occupation	...	...	55
Night Watchmen	...	...	2
Oakum Picker	...	...	1
Oilcake Workers	...	...	4
Painters	...	...	15
Porters	...	...	16
Plumber	...	...	1
Plasterer	...	...	1
Paint Mixer	...	...	1
Pattern Maker	...	...	1
Printers	...	...	2
Plate Cleaner	...	...	1
Packers	...	...	3
Paper Bag Makers	...	...	2
Paper Sorter	...	...	1
Porters, Railway	...	...	3
Postmen	...	...	2
Pavior	...	...	1
Rope Makers	...	...	4
Refrigerator Pipe Fitter	...	...	1
Rivetter	...	...	1
Rag Picker	...	...	1
School Children	...	...	189
Seamen	...	...	9

OCCUPATIONS.—*Continued.*

Seamstresses	2	Shipwright	1
Shunters	2	Tailors	4
Spice Packer	1	Tailoresses	5
Solderer	1	Travellers	2
Sugar Boiler	1	Tram Driver	1
Sawyer	1	Tram Inspector	1
Stonemasons	3	Ticket Examiner	1
Ships' Stewards	3	Tobacco Workers	10
Smiths' Strikers	3	Trunk Makers	2
Ships' Cooks	2	Upholsterers	2
Shop Assistants	4	Window Cleaners	2
Shoe Makers	3	Waiter	1
Shopkeepers	3	Wood Carver	1
Scavenger	1	Warehousemen	3

SUMMARY.

Indoor occupations	340
Outdoor ,,	234
School children	189
No occupation	55
Total	818

There is a reluctance to have periodical disinfection carried out in its entirety, principally on account of the upset and also the publicity involved which attracts the attention and comment of neighbours. If occasional spraying of the sick room is offered, it is generally accepted. In those cases where no care had previously been exercised in the proper disposal of the sputum, the result of the advice and instruction given was noticed in the marked improvement found on subsequent visits. It is very rare to find a disinfectant used in the receptacle for sputum. In a great number of instances where the patient is not

isolated, the reason given is the lack of accommodation owing to limited means. In a few instances where there is accommodation for a separate bed or room, inability to afford the requisite bedding and clothing prevents such isolation being carried out.

DEGREE OF ISOLATION FOUND ON VISIT.

255	or 31·17 per cent.	occupy a separate bedroom.
75	,, 9·16 per cent.	have a separate bed, but the room is shared by others.
69	,, 8·43 per cent.	the patient's bed is shared by children.
383	,, 46·82 per cent.	the patient's bed is shared by an adult.
36	,, 4·40 per cent.	the patient sleeps in the kitchen, which is also used as a living room.
818		

In a large number of instances improvement in the isolation arrangements has followed as a result of the re-visits and advice given, and it was found possible by an exchange of rooms to improve the conditions with respect to ventilation, light and isolation.

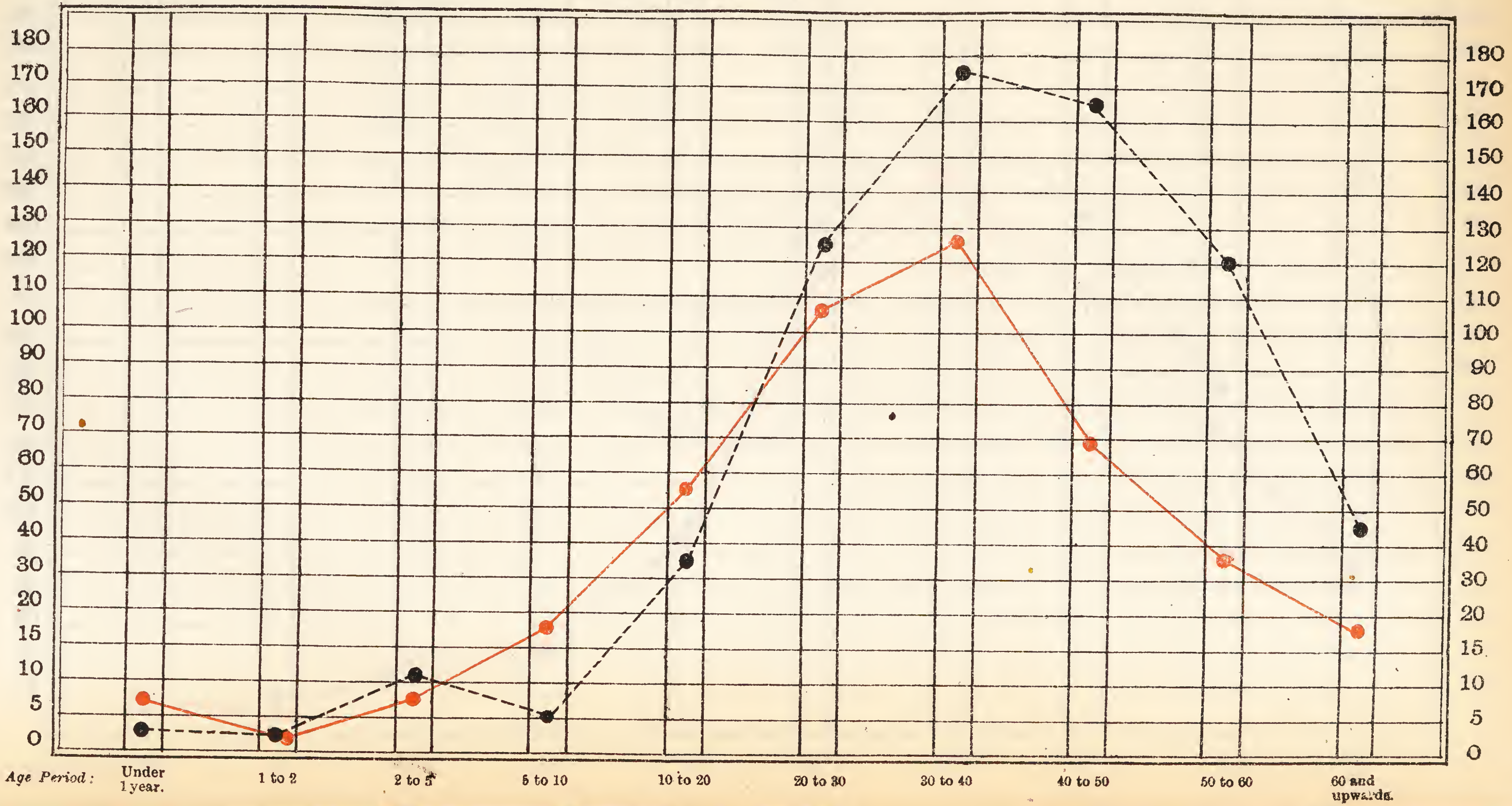
With regard to Tubercular disease other than Pulmonary Tuberculosis, the majority of these cases are children suffering from Tubercular glands and joints. 213 of them are males and 160 females.

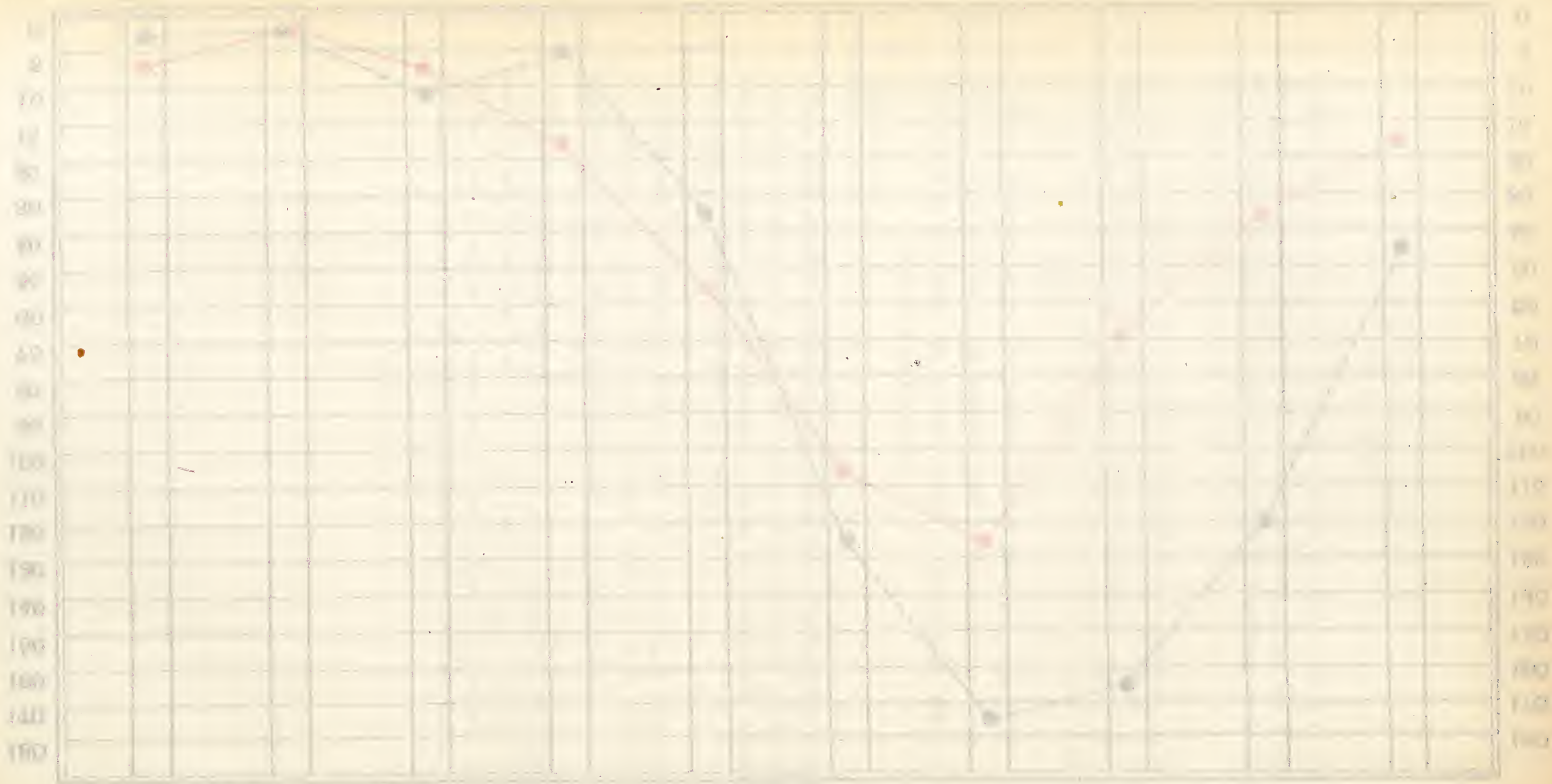
In 297 instances the average age is $6\frac{1}{2}$ years, whilst the 76 remaining cases are adults ranging from 16 to 62 years of age. Many of the children are in regular attendance at the Children's Infirmary, others have been referred by the School Medical Officers for observation.

CITY OF LIVERPOOL.

Comparative view of the total number of Deaths from Phthisis of Males and of Females at ten different age periods during the year 1909, Males being shown in Black dotted line, and Females in Red.

18771-1500-5/10 EST. R

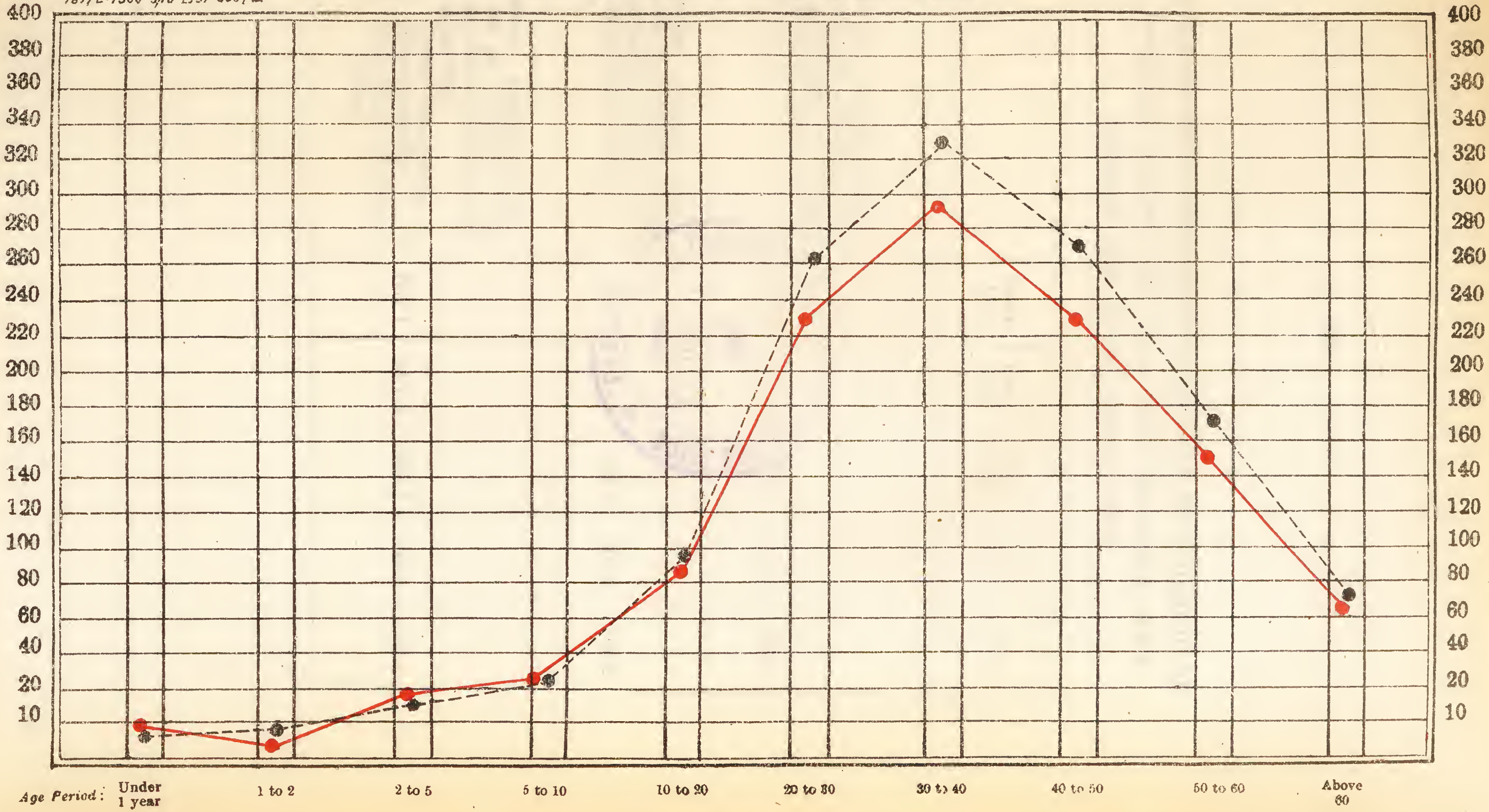




CITY OF LIVERPOOL.

Comparative view of the number of Deaths from Phthisis at ten different age periods during the year 1909 shown in Red, the average for the preceding ten years (1899-1908), being shown in the Black dotted line.

18772-1500-5/10 EST 6997 L



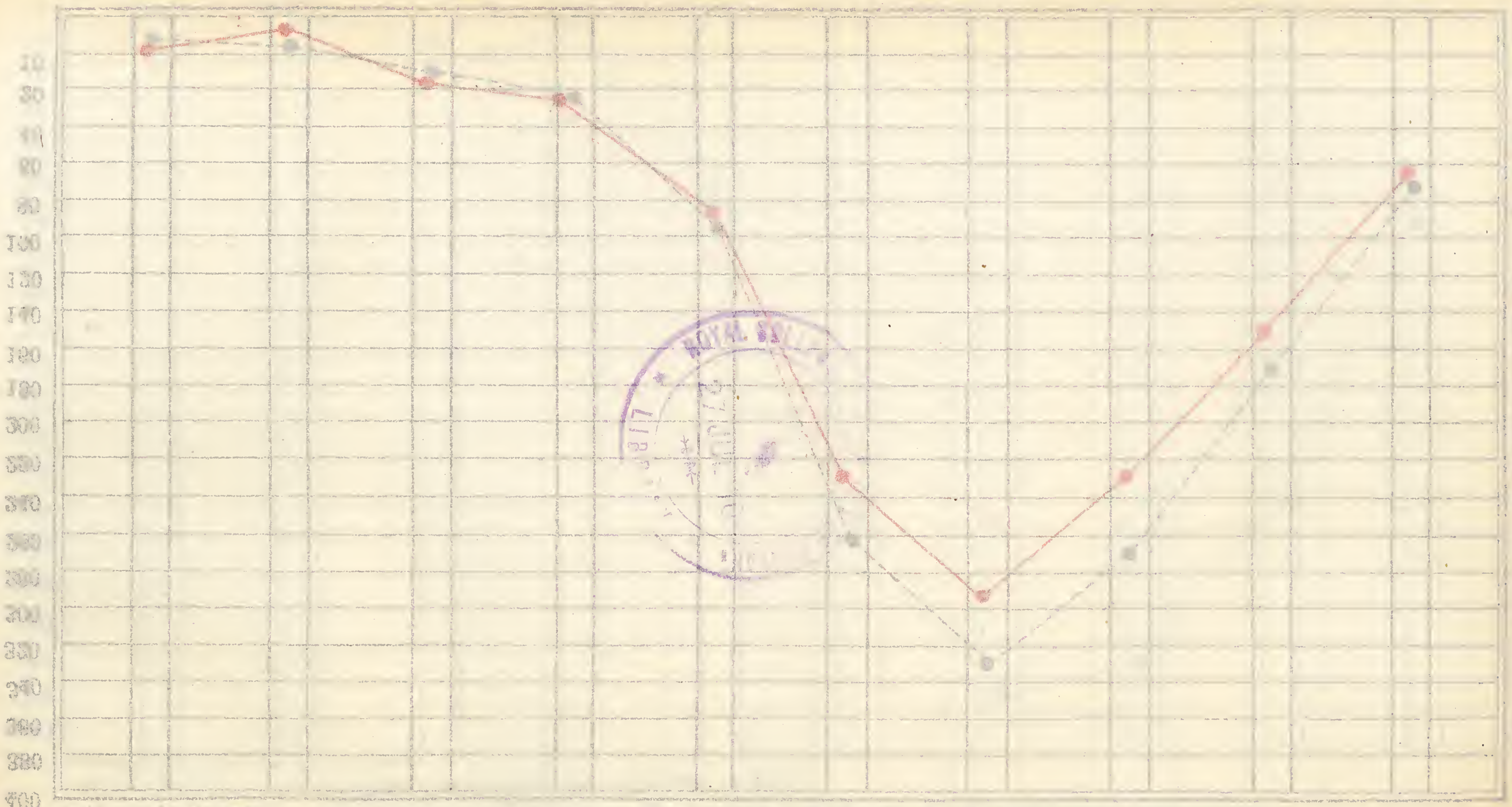


TABLE SHOWING PROGRESSIVE DECLINE IN TUBERCULAR DISEASES DURING THE LAST FOUR DECADES, AND DURING THE FOUR YEARS 1906-9.

	1866 to 1875.	1876 to 1885.	1886 to 1895.	1896 to 1905.	1906-9.
Annual Average Death-rate per 100,000 of the population, at all ages, from all forms of Tuberculosis	430·8	349·8	309·8	247·2	201·0
Annual Average Death-rate per 100,000 of the population above 5 years of age from Phthisis ...	362·8	278·6	244·4	203·8	168·2
Annual Average Death-rate per 100,000 of the population below 5 years of age from: Tabes Mesenterica Hydrocephalus ... Other forms of Tuberculosis.	637·1	597·3	539·1	339·5	262·8

The Group of Tubercular Diseases includes Phthisis, Tabes Mesenterica, Hydrocephalus, and other forms of Tuberculosis. They occasioned 1,503 deaths in the City of Liverpool during the year 1909.

DEATHS FROM PHTHISIS.

The number of deaths from Phthisis during the year was 1,116. The number of deaths during each of the preceding ten years, 1899-1908, has been as follows:—1,313, 1,287, 1,302, 1,347, 1,258, 1,282, 1,245, 1,235, 1,183 and 1,288.

DISTRICTS.	Quarters.								Year.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	13	11	20	7	13	7	15	8	61	33	94
Exchange	31	11	25	11	18	6	17	8	91	36	127
Abercromby	15	14	18	2	11	8	13	8	57	32	89
Everton	28	23	31	21	28	14	21	19	108	77	185
Kirkdale	16	13	13	10	11	11	15	8	55	42	97
West Derby (West)	20	23	22	9	17	6	15	4	74	42	116
Toxteth	23	18	14	14	19	6	22	10	78	48	126
Walton	10	7	7	5	2	8	7	8	26	28	54
West Derby (East)	6	8	14	5	11	8	6	5	37	26	63
Wavertree	6	2	4	2	2	3	8	6	20	13	33
Sefton Park ... . (late Toxteth Rural)	2	1	5	4	3	2	4	3	14	10	24
Garston	3	...	6	7	2	2	2	4	13	13	26
Fazakerley	...	1	...	1	...	1	...	...	...	3	3
Hospitals (Residences outside the City)	20	5	11	7	8	8	9	11	48	31	79
City	193	137	190	105	145	90	154	102	682	434	1,116

Ages at Death.

Under 1 year.	1–	2—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
9	2	16	22	21	74	227	297	231	154	63	1,116

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

DEATHS FROM OTHER TUBERCULAR DISEASES.

Viz. :—Tabes Mesenterica, Hydrocephalus, and other forms of Tuberculosis.

DISTRICTS.	Tabes Mesenterica.		Hydrocephalus.		Other forms of Tuberculosis.		Year.		
	M.	F.	M.	F.	M.	F.	M.	F.	T.
Scotland	2	2	2	4	6	5	10	11	21
Exchange	3	3	4	3	8	10	15	16	31
Abercromby...	3	...	2	5	5	5	10	10	20
Everton	3	3	14	10	20	9	37	22	59
Kirkdale	3	4	5	5	12	5	20	14	34
West Derby (West)	17	...	9	8	10	15	36	23	59
Toxteth	9	3	5	8	17	12	31	23	54
Walton	7	1	4	3	4	7	15	11	26
West Derby (East)	2	4	8	3	4	5	14	12	26
Wavertree	3	2	1	5	5	2	9	9	18
Sefton Park ... ... (late Toxteth Rural)	2	1	3	2	2	3	7	6	13
Garston	...	1	...	2	1	2	1	5	6
Fazakerley...	1	...	...	...	...	...	1	...	1
Hospitals (Residences outside the City)	1	1	2	1	8	6	11	8	19
City	56	25	59	59	102	86	217	170	387

Ages at Death.

Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & upwards.	All Ages.
82	59	91	48	25	18	26	19	14	2	3	387

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

VOLUNTARY NOTIFICATION OF PHTHISIS.

The system of voluntary notification of those cases of consumption in which the services of the Health Department could be of use came into operation on 14th February, 1901, and has been continued with good results.

A special form upon which the notification can be made has been circulated amongst medical men, and in those cases in which the requirements of the Health Committee have been fulfilled, the usual notification fee has been paid. Since the inauguration of the system the number of notifications has been as follows :—

Year.	Males,	Females.	Total.
1901	1148	649	1797
1902	1469	730	2199
1903	1153	721	1874
1904	1068	641	1709
1905	1257	604	1861
1906	1257	662	1919
1907	1446	784	2230
1908	1373	672	2045

During the year 1909, the cases notified numbered	1,033	
Of this number	65	were duplicates.
Leaving a total of.....	968	Cases.
Rooms, Bedding, &c., disinfected in	325	instances.
Bedding, &c., removed for special disinfection in	39	,,

It will be noted that only those cases are notified in which action on the part of the sanitary staff is needed; in many instances, the friends of the patient have themselves carried out disinfection under the guidance of their medical adviser.

Great advantage has attended the admission of patients to the Fazakerley Hospital (see page 266).

The age period at which the greatest number of cases were notified is from 25 years upwards, 224 males and 142 females being notified; 137 males and 109 females were notified between the ages of 15 and 25 years.

Total number of Males notified.....	565
Total number of Females notified	403

There were 279 cases of Tuberculosis other than of the lungs reported.

The occupations showing the largest number of cases were as follows:—

Labourers	116	Cases.
Firemen (Marine)	12	,,
Seamen	14	,,
Charwomen	21	,,
Domestic Servants	18	,,
Painters and Plumbers	12	,,
Bookkeepers.....	12	,,
Joiners	23	,,
Paper Bag Makers	14	,,

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

These regulations came into effect on the 1st January, 1909, and were issued by the Local Government Board in pursuance of an order made under Section 130 of the Public Health Act, 1875, as amended and extended by the Public Health (London) Act, 1891, and the Public Health Act, 1896, to provide for the notification to the Medical Officers of Health of Sanitary Authorities of cases of pulmonary tuberculosis occurring amongst the inmates of Poor Law Institutions, or amongst persons under the care of District Medical Officers, and for the taking of certain measures in such cases.

Notification by Medical Officers of Poor Law Institutions.

Article IV. of the Order directs that the Medical Officer of a Poor Law Institution, as defined by Article I., shall, within 48 hours after his first recognition of the symptoms of pulmonary tuberculosis in the case of a poor person who is an inmate of the institution, post to the Medical Officer of Health for the sanitary district in which the person resided immediately before he became an inmate of the institution a notification of the case.

The notification must be made on a printed form as set out in the Schedule to the Order.

Notification by District Medical Officers.

Article V. directs that a similar notification shall be posted to the Medical Officer of Health by the District Medical Officer in the case of any poor person suffering from pulmonary tuberculosis on whom he is in medical attendance according to his agreement with a Board of Guardians.

The notification must be posted within 48 hours after the District Medical Officer has first recognised the symptoms of pulmonary tuberculosis, and must be addressed to the Medical Officer of Health acting for the sanitary district in which the residence of the poor person is situate.

Notification by Superintending Officers of Poor Law Institutions.

Under Article VI. it will be the duty of the Superintending Officer of a Poor Law Institution to post to the Medical Officer of Health on a printed form as set out in the Schedule to the Order a notification of the actual or intended place of destination and address at that place of any person leaving the institution in respect of whom a notification has been made by the Medical Officer of the institution under Article IV.

The notification must be posted within 48 hours after the departure of the person to whom it relates, and must be sent to the Medical Officer of Health of the sanitary district in which the intended destination of the person is situate.

Notification of changes of Address by Relieving Officers.

Article VII. provides that a Relieving Officer shall notify any change of address (other than by admission to a Poor Law Institution) of a person in respect of whom a notification has been made under Article V. by a District Medical Officer.

The notification must be made on a printed form as set out in the Schedule to the Order, and must be sent to the Medical Officer of Health for the sanitary district in which the address to which the person moves is situate.

The notification must be posted within 48 hours after the Relieving Officer has obtained accurate information respecting the change of residence.

During the year the cases notified numbered	3,783	
Of this number	778	were duplicates.
Leaving a total of.....	3,005	Cases,
Rooms, Bedding, &c., disinfected in	1,100	instances.
Bedding, &c., removed for special disinfection in	86	,,

The age period at which the greatest number of cases were notified is from 25 years upwards, 1,659 males and 606 females being notified; 323 males and 127 females were notified between the ages of 15 and 25 years.

Total number of Males notified	2,109
Total number of Females notified	896

The occupations showing the largest number of cases were as follows:

Labourers	240	Cases
Firemen (Marine)	18	,,
Hawkers	13	,,
Seamen	12	,,
Carters	18	,,
Charwomen	23	,,
Domestic Servants	20	,,
Painters and Plumbers	16	,,
Bookkeepers	11	,,

INFORMATION ON CONSUMPTION.

A card containing the following information for consumptive people and those who live with them was circulated through appropriate channels:—

1.—Consumption is a preventible disease which is caused by minute living germs, called "tubercle bacilli," which usually enter the body with the air breathed.

2.—The matter which consumptive people cough or spit up contains the germs of the disease in great numbers. If this matter is spat upon the floors, or the walls of any public or private place, or elsewhere, as soon as it becomes dry the germs of the disease which it contains are blown about and float in the air, like any other minute particles of dust, and are inhaled by anybody breathing that air: or they may fall upon milk or other food, and gain access to the body with that food. These are the commonest ways in which the seeds of the disease enter the body of a healthy person.

3.—It is dangerous to sleep with or to live in close relationship with a consumptive, unless the patient is careful that what he coughs up is destroyed. A pocket bottle or a cup containing a little water and disinfectant should be used to spit in, so that the matter may not dry, and it should be emptied in the closet (not into the ashpit, or upon the footwalk or the roadway), and carefully washed afterwards with boiling water. If the consumptive prefers to use soft paper, linen or calico cloths or handkerchiefs to spit in, they should be thrown upon the fire and burnt forthwith. He should take care that his hands, face, and clothing do not become soiled with the matter coughed up. He should never swallow the expectoration: it is dangerous. When coughing he should always cover the mouth with the hand and turn the head aside.

4.—A consumptive should sleep alone; the windows should always be wide open, except when dressing and undressing. The bed-clothing and personal underclothing should be boiled and washed separately from the clothing of other people.

5.—Tubercle bacilli are not only the cause of ordinary consumption of the lungs, but they may also give rise to consumption of the bowels and other parts of the body, and therefore milk and other uncooked food should be carefully protected from the tubercle bacilli. If such food be kept in a place to which a consumptive patient of careless habits has access and who may spit upon the floor, the dry particles of the matter spat up may blow about with dust and find access to milk or other food, and in this way contaminate it. Mothers who are consumptive should not suckle their children.

6.—Cows suffer from consumption, and the milk from consumptive cows is liable to contain the tubercle bacilli. Milk had better be boiled for a few seconds unless the consumer is sure that it comes from a healthy cow, and that it has not been exposed to danger of contamination afterwards. These precautions should be specially observed in the case of children.

7.—Consumption is a disease from which large numbers of patients recover if the rooms they occupy are always kept thoroughly well-ventilated, and clean and free from dust.

8.—Sunshine and fresh air destroy tubercle bacilli, and are the principal curative agents; the more sunshine and fresh air the consumptive patient gets, the more likely is he to recover.

9.—Sanitary improvements which have been carried out in the city with a view to admit more pure air and sunshine to dwellings, and to lessen overcrowding, have reduced the mortality from consumption to about one-half of what it was 30 years ago, but, to reduce it still further, the people must help themselves by keeping their rooms clean and well-ventilated, and by maintaining strictly temperate habits.

10.—Rooms that have been occupied by consumptives should be thoroughly disinfected and cleansed before they are again occupied, and the carpets and bedding should be disinfected; in fact, so far as these precautions are concerned, consumption may be regarded in precisely the same light as any other infectious disease.

11.—The Officers of the Health Department are always ready to do the necessary disinfection, both of rooms and of clothing, free of charge.

The accompanying diagrams illustrate the changes which have been taking place during the last twenty to thirty years:—

(*a*) In the City of Liverpool;

(*b*) In England and Wales;

(*c*) In Scotland;

(*d*) In Ireland.

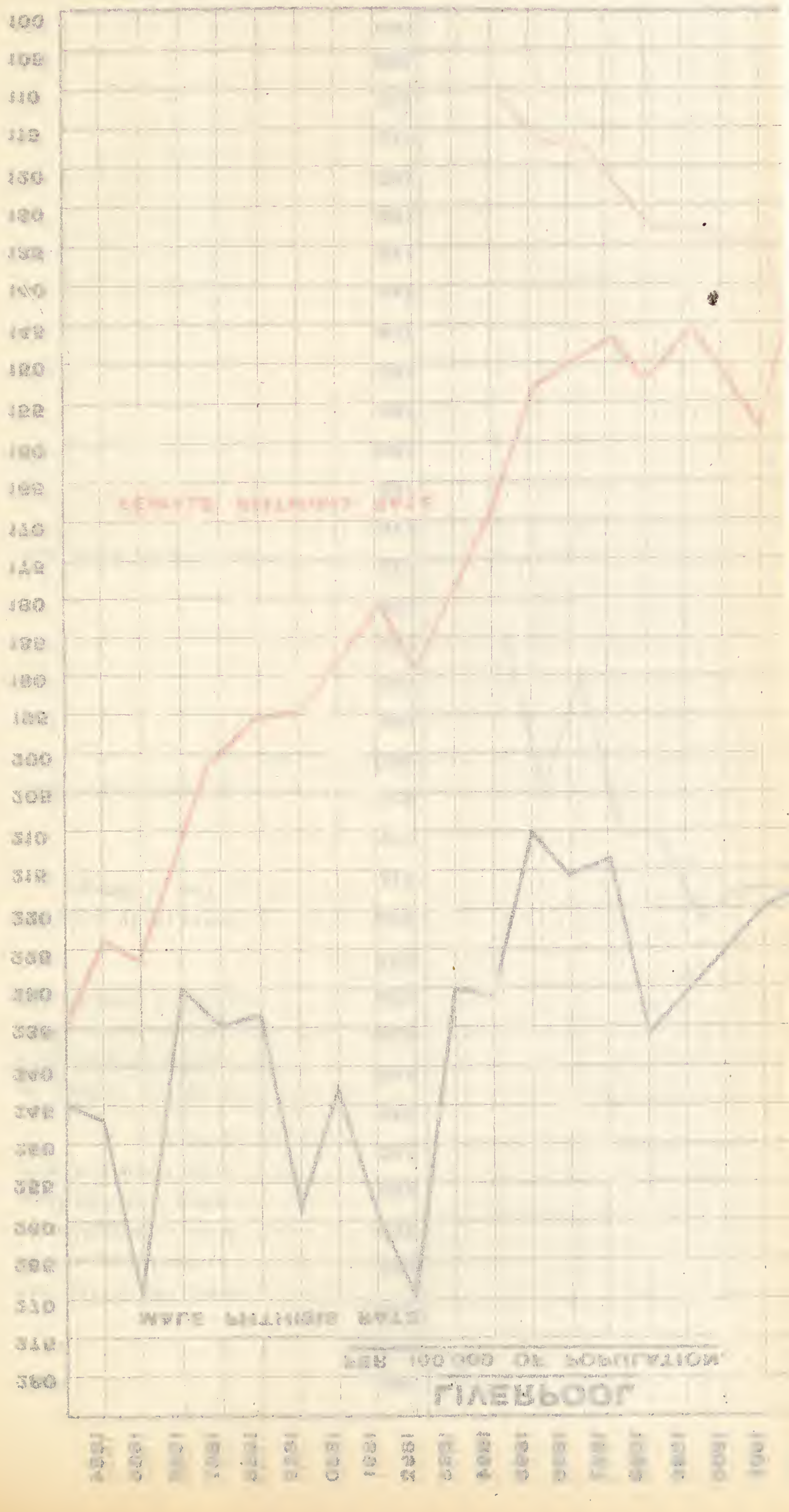
It will be seen that the decline has been marked in both sexes, but much more so in the female than in the male.

LIVERPOOL

PER 100,000 OF POPULATION.



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PHTHISIS RATES ENGLAND AND WALES

PER 1,000,000 OF POPULATION.

MALE

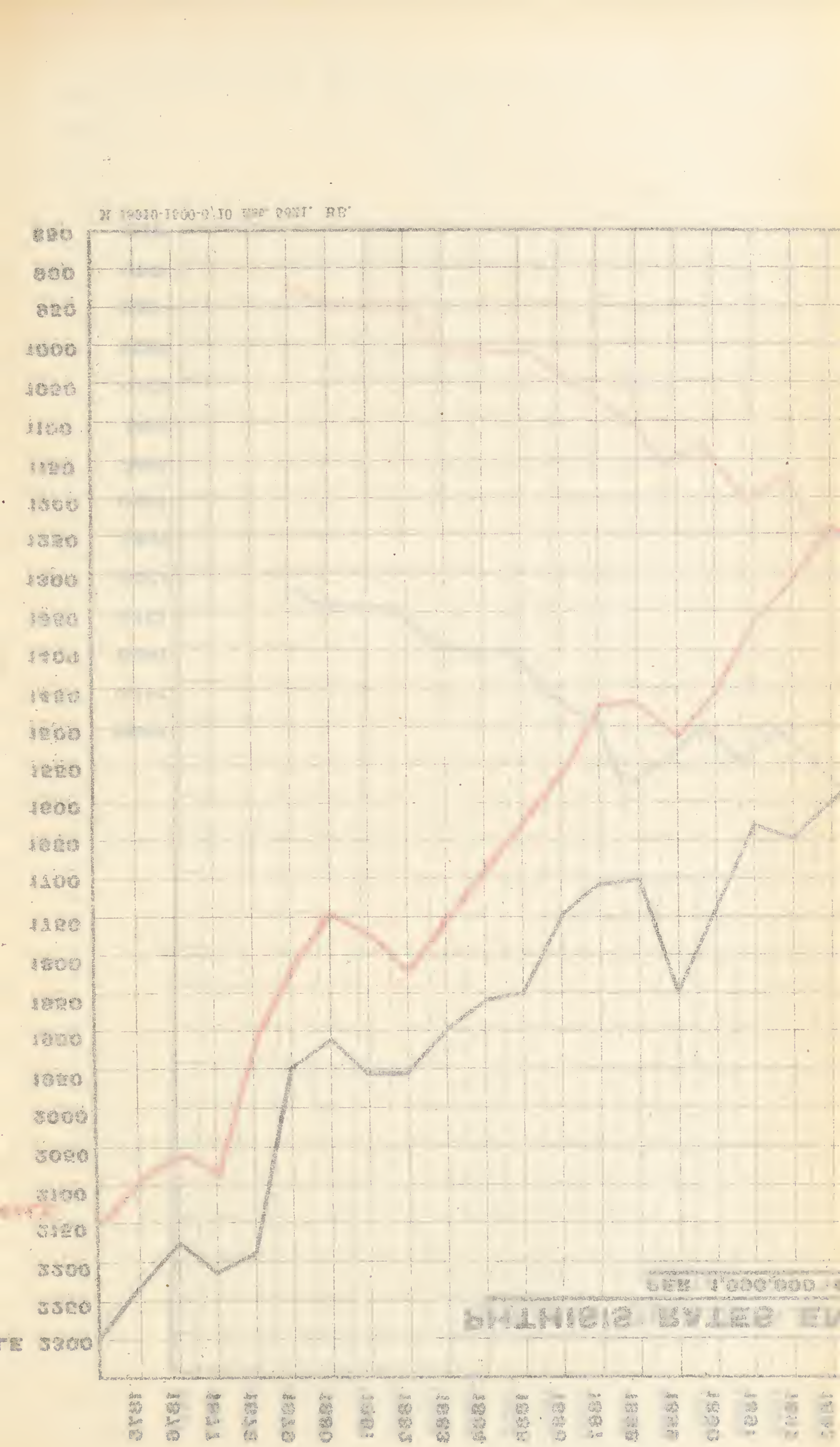
FEMALE

1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911

2300 2250 2200 2150 2100 2050 2000 1950 1900 1850 1800 1750 1700 1650 1600 1550 1500 1450 1400 1350 1300 1250 1200 1150 1100 1050 1000 950 900 850

1500 1450 1400 1350 1300 1250 1200 1150 1100 1050 1000 950 900 850

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PHTHISIS RATES SCOTLAND

PER 1,000,000 OF POPULATION.

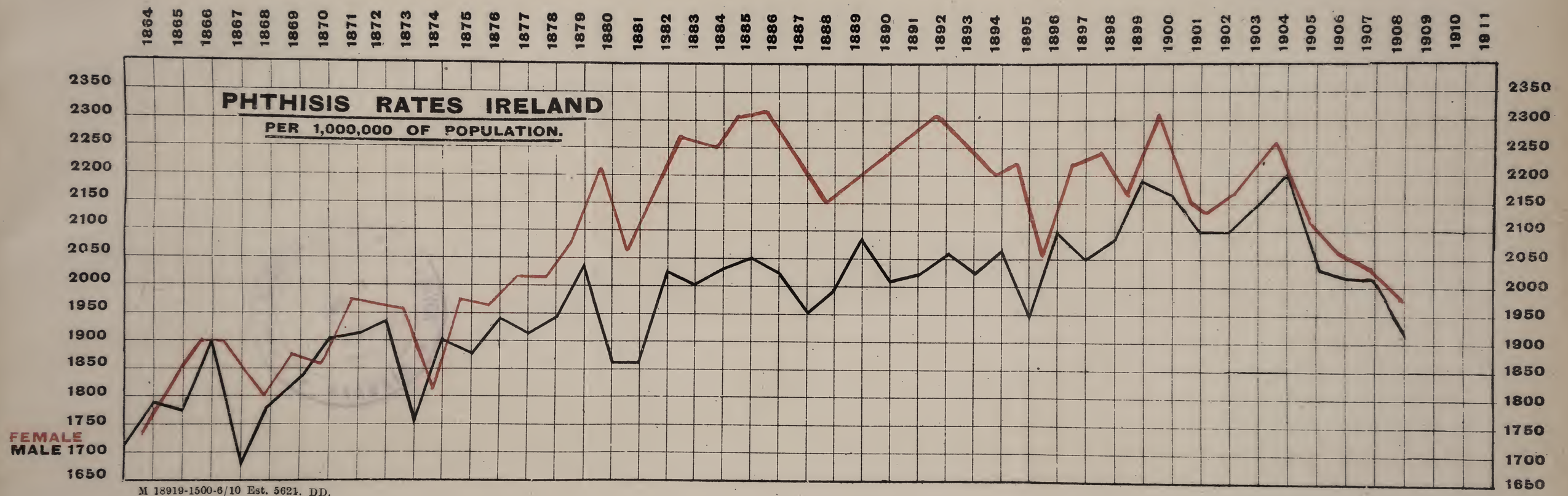
FEMALE

MALE

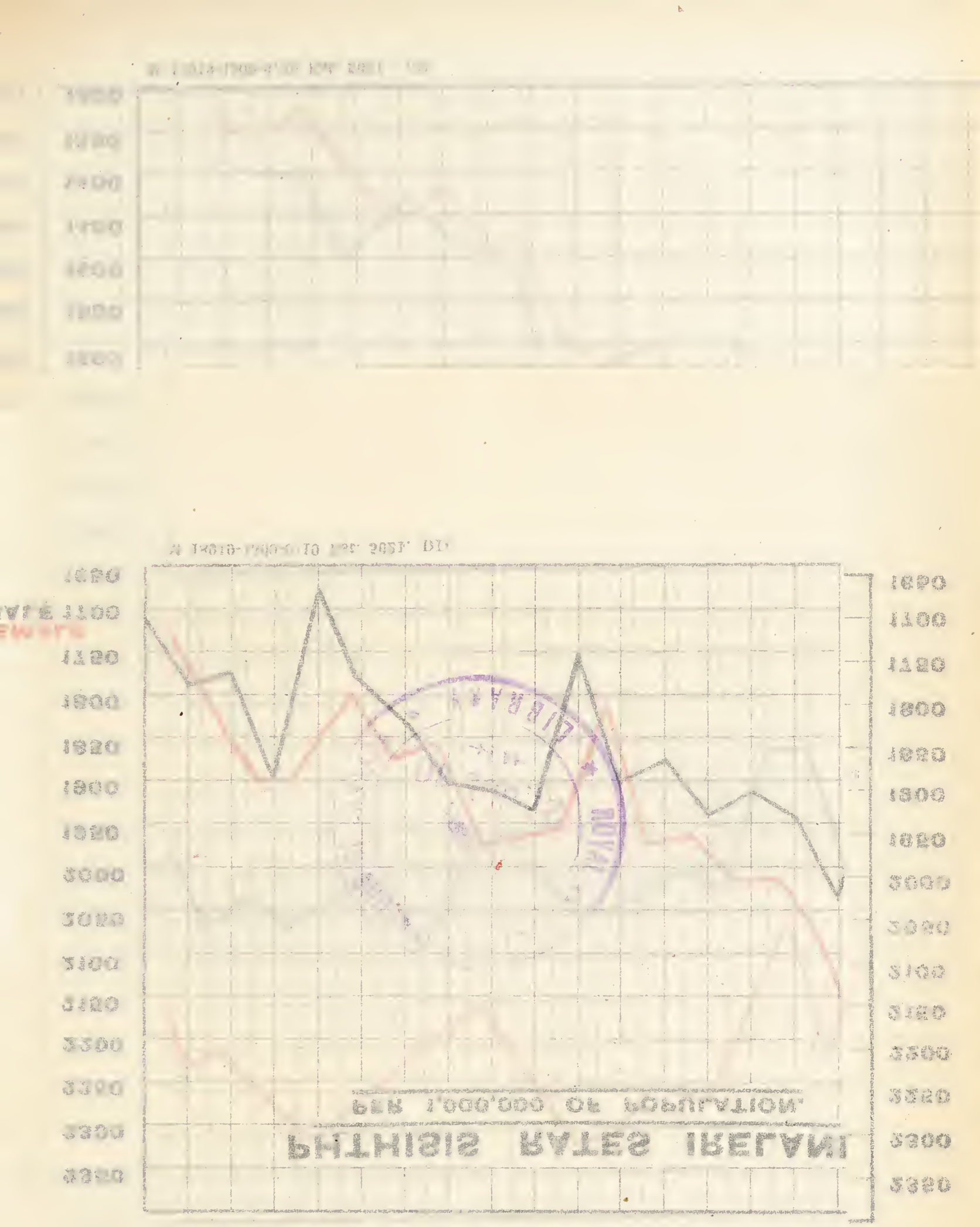
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PHTHISIS RATES IRELAND
PER 1,000,000 OF POPULATION

ALCOHOLISM.

A further diminution in the number of deaths from excessive drinking is a gratifying feature during 1909. It is in part at least due to the diminution of the facilities for obtaining drink in the poorer parts of the city, parts which a glance at the maps facing page 258 will show to still have a very unnecessary number of licensed premises.

The total number of deaths certified by Coroner's Juries to be the result of excessive drinking is 91.

Fifty of these deaths occurred in the first six months of the year and 41 in the second six months.

Satisfactory as this decline is, the figures still indicate a direct sacrifice of life to drink which is deplorable.

In addition to the foregoing two men and seven women were fatally injured whilst under the influence of drink; one man, aged 35, poisoned himself whilst in a state of intoxication; one woman, aged 45, poisoned herself whilst in a state of temporary insanity brought on by excessive drinking, and one man, aged 49, committed suicide by throwing himself into a molasses tank in a distillery whilst in a state of temporary insanity brought on by excessive drinking. In the case of one death resulting from personal violence, both the person who inflicted the injuries and the injured person were under the influence of drink at the time.

"Alcoholism" is certified to be the cause of death of three men.

It has been erroneously claimed that alcohol is a necessary part of the food of the people. Those who put forward a claim of this kind have not perhaps considered that the long series of fatalities attending its use is a characteristic from which foods happily are free; indeed, it is inconceivable that means would not be found to restrict the sale of any article of food or of any drug which destroys an average of (extending over a great number of years) three lives a week in this City.

It has many times been pointed out that the number of deaths does not indicate the extent of the mischief caused by excessive drinking.

Perhaps the greatest of all harm is done by the squandering away of money on an article which, whilst unfitting the drinker for work, degrades him to a condition of poverty which means want of the necessaries of life to those dependent upon him. Many thousands of instances of cruelty to children are known to occur annually in this City owing to the neglect and brutality of parents usually reduced to poverty through wasting their money on drink. These children would be without clothes and without food were it not for the action of the charitable. That it is drink, and drink alone, which is so largely responsible for the indescribable misery of so many children is shown by the generally admitted circumstance that it is only when those responsible for them are under the influence of drink that the children are actually ill-used, and that bodily injury is inflicted upon them.

A comparison of three Districts in regard to the general death-rate, the proportion of deaths due to excessive drinking, and the proportion of deaths which take place in Workhouses and Hospitals, shows what proportion of the population in times of sickness are dependent upon charitable aid.

	Population.	General Death-rate per 1,000.	Proportion of Deaths in Workhouses and Hospitals.	Proportion of Deaths due to Excessive Drinking.
Exchange	40,288	31·0	51·6 per cent.	1·9 per cent.
Walton	65,828	13·3	25·6 ,,	0·004 ,,
Wavertree	43,411	10·0	21·5 ,,	0·002 ,,

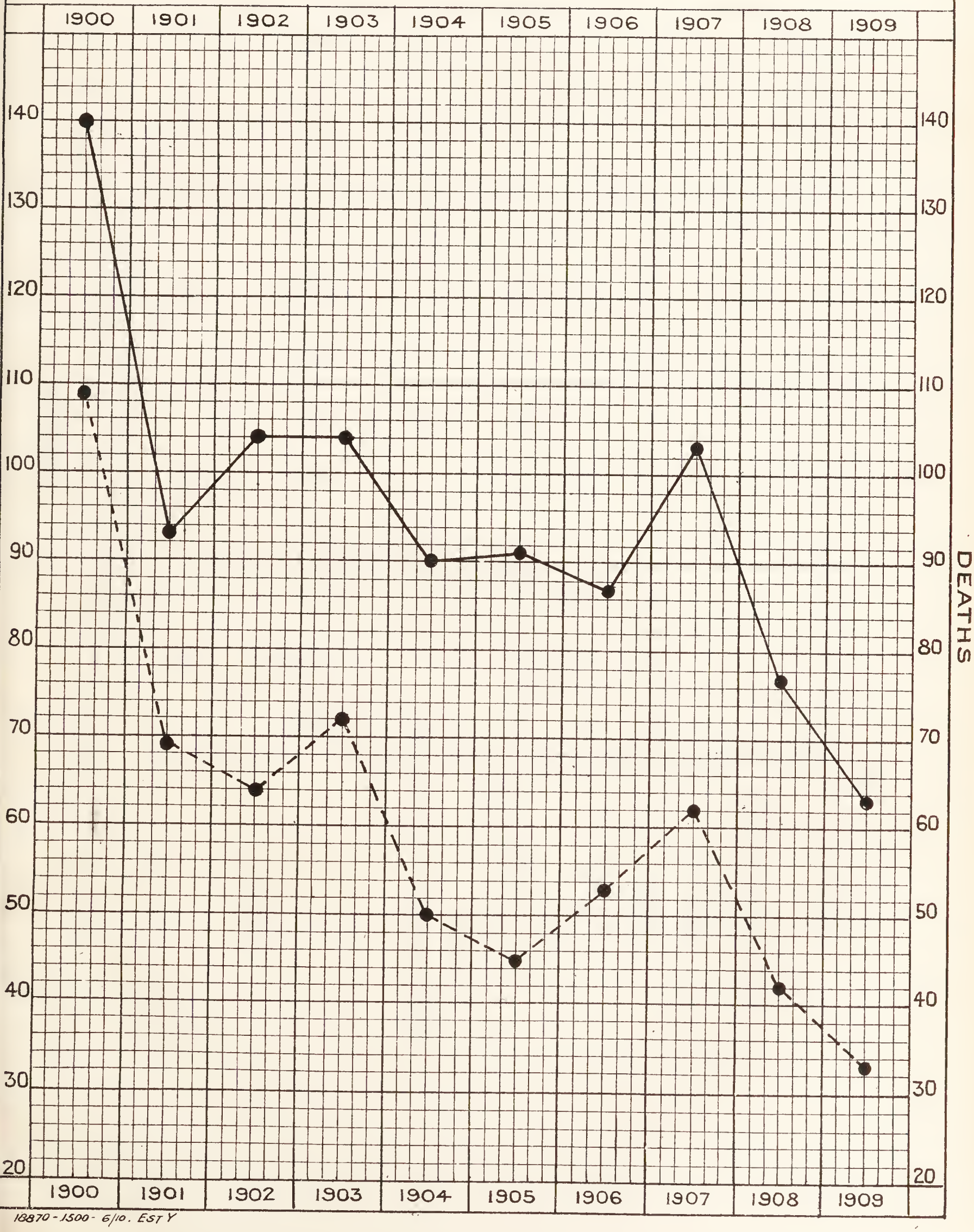
Some further aspects of the general question are alluded to on page 23 of the Report for 1907, where the question of infant mortality is briefly dealt with, and the maps facing page 258, showing the insanitary areas now being dealt with by the Housing Committee, deserve careful attention.

The circumstance that many of the broken down and unfortunate classes from various localities drift into the lodging-houses in Exchange District, and so pass on into Workhouses, will not be lost sight of.

CITY OF LIVERPOOL.

DEATHS FROM EXCESSIVE DRINKING DURING THE 10 YEARS 1900 TO 1909.

The Black Line denotes Males and the Dotted Lines Females.



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CANCER.

The following table indicates the number of deaths from Cancer during the last five years, and the part of the body affected :—

DISEASE.	1905.			1906.			1907.			1908.			1909.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Cancer of Stomach and Bowels..	139	115	254	114	121	235	111	116	227	150	132	282	135	149	284
,, Liver	26	34	60	34	48	82	28	50	78	23	37	60	33	55	88
,, Urinary and Generative Organs	18	107	125	22	100	122	19	125	144	21	111	132	4	121	125
,, Breast.....	...	54	54	...	66	66	...	68	68	1	51	52	...	53	53
,, Head and Face	21	6	27	24	13	37	30	6	36	29	9	38	24	8	32
,, Tongue, Neck, and Throat.....	51	13	64	62	20	82	75	18	93	51	6	57	61	6	67
,, Other parts of the Body	15	6	21	20	14	34	10	9	19	14	7	21	21	6	27
,, Parts not specified ...	8	7	15	6	14	20	7	12	19	9	7	16	9	9	18
Total	278	342	620	282	396	678	280	404	684	298	360	658	287	407	694

TRACHOMA AND OTHER EYE DISEASES.

Trachoma and other forms of eye disease are common amongst the transmigrants from Eastern Europe, viz.:—Russians, Russian Jews, Armenians, Turks, and Syrians.

Scandinavians and Germans are comparatively free from eye disease.

Russians and Russian Jews are always booked through from the Continent to U.S.A. or Canada.

On arrival in Liverpool, if found to be suffering from eye disease, chronic and incurable, they are sent back at once to Russia.

If the disease is probably curable within about two months, the Russians are then taken charge of by the Libau Agent in Liverpool. He is responsible for their whereabouts, directs them to private lodgings, and they receive medical treatment, by payment, from a local medical practitioner, until fit to sail by any of the various shipping companies' vessels.

The Russian Jews in a similar condition are taken charge of by the Jewish Board of Guardians. They allow the patients a small sum of money weekly, find them private lodgings, and provide free medical treatment by a Jewish doctor, who attends the patients until they are fit to sail.

A number of Russians and Jews have undergone this treatment, and some were kept about three months in Liverpool. These people are lodged in the neighbourhood of Duke, Bailey, and Cookson Streets.

With regard to Armenians, Turks, and Syrians, these people are not booked through to America or Canada.

Marseilles seems to be the chief port from whence they are sent overland to Liverpool, and although almost every one of them suffers from eye disease, they appear to pass through Southampton, Newhaven, and Grimsby without objection.

Whilst in Liverpool they are medically treated by local practitioners.

These people are not carried by any Liverpool lines owing to the risk of deportation, but when medically fit they proceed to London, or Rotterdam, for transhipment to U.S.A. or Canada.

FEVER AND DIARRHŒA MORTALITY.

The following table shows the death-rate per 1,000 of the population, and the number of deaths from Fever and Diarrhœa during the last twenty-seven years:—

Year.	*Death Rate per 1,000 of Population from all causes.	Deaths from Diarrhœa.	Deaths from Fever.		
			Typhus.	Typhoid.	Continued.
1883	27·7	541	408	108	24
1884	26·6	841	77	112	16
1885	25·6	422	71	95	16
1886	26·1	781	47	140	11
1887	26·4	619	52	130	12
1888	23·1	431	32	125	4
1889	24·9	575	45	167	...
1890	27·5	468	23	99	1
1891	26·8	330	37	92	2
1892	24·4	415	18	111	2
1893	26·7	866	44	221	5
1894	23·1	503	50	248	7
†1895	24·8	1,108	24	197	4
1896	21·4	851	36	166	2
1897	22·8	1,482	23	145	5
1898	22·2	956	19	148	5
1899	24·1	1,158	13	182	4
1900	23·1	900	11	120	4
1901	21·6	1,269	14	154	3
‡1902	21·6	611	25	190	2
1903	19·8	657	57	108	...
1904	21·9	1,785	25	82	1
§1905	19·2	960	28	49	1
1906	20·2	1,298	8	85	1
1907	18·3	544	18	92	...
1908	18·5	630	10	73	2
1909	18·3	514	8	54	...

* Calculated on corrected population as per Census Returns of 1891 and 1901.

† City Boundaries extended. ‡ Garston included. § Fazakerley included.

Mr. Plummer, M.A., F.R.A.S., Astronomer to the Mersey Docks and Harbour Board, has kindly furnished the following tables relating to Meteorological observations made by him at the Liverpool Observatory, Bidston :—

LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

Latitude 53° 24′ 5″ N. Longitude 3° 4′ 20″ W.

Height above the Mean Level of the Sea 202 feet.

1909.	Barometer. Mean.	Temperature. Mean.	Rainfall.		Mean Monthly Humidity. (Complete Saturation equal 100).
			Amount.	No. of days on which ·01 in. or more fell.	
	Inches.	Degrees.	Inches.		
January	30·103	39·1	1·414	17	83
February	30·133	38·4	·514	9	82
March	29·506	39·3	2·402	19	83
April	29·923	48·3	2·096	16	68
May	30·079	52·4	1·242	9	63
June	29·985	53·6	2·538	15	75
July.....	29·886	58·5	3·122	20	77
August	29·979	59·1	2·450	15	79
September	30·040	54·3	2·430	14	79
October	29·720	51·0	3·367	24	79
November	30·023	42·7	·884	19	84
December	29·610	40·5	5·988	25	88

Difference from the Average Quantities observed during the last 40 years.

1909.	Barometer.		Temperature.		Rainfall.	
	Above Average.	Below Average.	Above Average.	Below Average.	Above Average.	Below Average.
	Inches.	Inches.	Degrees.	Degrees.	Inches.	Inches.
January	·168	...	...	·1	...	·780
February	·201	...	...	2·9	...	1·207
March	...	·386	...	2·9	·644	...
April	·025	...	1·	...	·485	...
May	·114	...	·6	...	...	·673
June	...	·007	...	3·8	·508	...
July	...	·061	...	2·2	·436	...
August	·065	...	...	1·4	...	·538
September	·091	...	...	1·9	...	·476
October.....	...	·152	1·4	...	...	·221
November	·125	...	...	·5	...	1·745
December.....	...	·264	·6	...	3·414	...

Observations of Velocity of Wind.

1909.	Average Hourly Velocity for Month.	Maximum Hourly Velocity.	Date.	Minimum Hourly Velocity.	Date.
	Miles.	Miles.		Miles.	
January	18·4	57	Jan. 14	1	January 23, 24.
February....	17·1	56	Feb. 3, 4	1	February 1, 6.
March.....	13·8	50	March 25	1	March 1, 4, 21, 31.
April	16·6	44	April 28	1	April 9, 10.
May	13·9	39	May 6	0	May 2, 13.
June	12·0	30	June 8	1	June 1, 3, 15, 19, 22, 28, [29.
July	19·8	44	July 24	2	July 2.
August	13·6	43	Aug. 31	0	August 6, 9.
September..	12·3	49	Sept. 7	1	September 12, 19, 25, 26, [29.
October.....	17·6	55	Oct. 24	1	October 1, 30.
November...	14·7	59	Nov. 12, 13	0	November 1, 4.
December...	18·6	72	Dec. 3	1	December 7, 29.

SANITARY ADMINISTRATION.

SANITARY ADMINISTRATION.

For the purpose of carrying out the requirements of the various Sanitary Acts of Parliament and the Orders, Bye-laws, and Regulations made thereunder, the following staff of the Medical Officer of Health's Department has been employed during the year:—

*Chief Sanitary Inspector	1
*Deputy Chief Sanitary Inspector	1
*Prosecuting Sanitary Inspectors	7
*Inspectors for General Sanitary Purposes	31
* ,, of Ashpits and Ashbins	2
*Female Inspectors for General Sanitary Purposes ...	21
*‖ ,, ,, of Midwives	1
,, ,, for Ophthalmia Neonatorum ...	1
* ,, Superintendent of Humanised Milk Depôts	1
,, Assistants at Humanised Milk Depôts ...	24
§Inspectors of Meat and Animals	4
¶ ,, under the Diseases of Animals Act ...	6
** ,, of Fish and Fruit	4
* ,, under the Sale of Food and Drugs Act ...	3
* ,, ,, Workshop and Shop Hours Acts	3
† ,, , Smoke	3
*** ,, , Removing Patients and Infected Bedding and Disinfecting Infected Houses, &c.	11
*‡Superintendents of Ambulance Staff	1
* ,, Disinfecting Apparatus	2
* ,, Disinfecting and Wall Paper Stripping Staff	1
Men engaged on Wall Paper Stripping Staff ...	21
*Chief Inspector of Common Lodging and Sub-let Houses	1
***Inspectors of Common Lodging and Sub-let Houses...	15
*Inspector of Canal Boats	1
* ,, Bakehouses	1
*Inspectors of Cowsheds and Milkshops	2
***Notice Servers	3
Clerical Staff	25

In every case Officers are selected for these positions, whose previous training and occupation have been such as to fit them for the special duties they are called upon to discharge. Those marked * are required to hold the certificate of the Sanitary Institute of Great Britain or a Certificate equivalent thereto. || Registered midwife, a fully qualified nurse, and holds diploma of London Obstetrical Society. § Butchers by trade; candidates are submitted to practical examination upon the lines which have been indicated in the Report of the Royal Commission upon Tuberculosis. ¶ Five are also Port Sanitary Inspectors. ** Fishmongers by trade. † Hold Marine Engineers' First Class Certificates. ‡ Holds Certificate of St. John Ambulance Association. *** Several hold the Certificate of the Sanitary Institute, or an equivalent thereto.

The number of occasions upon which the advice and assistance of the Health Department have been sought has increased during the year. These applications fluctuate slightly year by year; in 1905 they were 8,365; in 1906, 8,703; in 1907, 8,279; in 1908, 8,575; and in 1909, 8,779. As in former years, complaint in many cases was made to the Health Department only after repeated requests addressed to the persons causing or allowing the nuisance, or to agents or owners of property, had been ignored. Generally speaking, these complaints arise in connection with jerry-built property. A great deal of the time of the inspectors was taken up by these special examinations.

Requests to examine important public buildings and offices, as well as highly-rented dwelling-houses, are numerous, and the application of the smoke test has in many cases brought to light defects in the drainage system. Requests for the application of the smoke test are frequent, and involve considerable time in carrying out.

What is well known as "insanitary property" is gradually diminishing in the city. A good deal of it, however, still remains, necessitating the frequent service of notices to abate nuisances. Owners would do well to demolish property such as this, and erect suitable habitations in their place. By thus co-operating with the Housing Committee, they would rid themselves of the annoyance of receiving notices, and remove centres of disease and degradation from the city.

The following table shows the number of nuisances found by routine inspection or on complaints, and the character of the proceedings taken to abate the nuisances, and the results:—

		1908.	1909.
Number of Complaints made by Inhabitants		8,575	8,779
,, Nuisances discovered on above complaints...		12,256	11,726
,, ,, ,, ,, house to house inspection ...		78,771	74,567
Total Nuisances ...		91,027	86,293
,, Notices issued	Owners	43,495	41,418
	Occupiers	1,599	1,124
Total Notices ...		45,094	42,542
,, Notes to Complainants		1,992	1,973
,, ,, sent to comply with notices		6,336	6,695
,, Re-inspections of Nuisances		150,652	154,296
,, Nuisances abated on re-inspection		81,660	76,933
,, Visits to Premises under observation ...		1,078	1,332
,, Incidental calls		36,150	29,254
,, Informations laid for nuisances		376	359
,, Fined		41	22
,, of Magistrates' Orders		203	216
,, Acquitted or Withdrawn		132	121
Amount of Fines and Costs ...		£51 6 6	£52 6 6

The nuisances dealt with comprise mainly—defective and choked drains, sink waste pipes and spouts; defective roofs; defective flagging and paving; defective water-closet basins, putty joints, walls, floors, seats and doors; defective or dirty cisterns; defective supply pipes; insufficient or no supply of water; defective chimney flues; offensive matter, animals or poultry on premises; also dirty floors, &c. In all cases of choked drains the staff have served upon the occupiers the usual notice, which directs attention to the responsibility of the occupiers where the stoppages are due to their carelessness and neglect, with the result that there has been a decrease in the number of notices issued to owners in respect to this class of nuisance.

WATER CLOSET CONVERSIONS AND NOTICES TO PROVIDE ADEQUATE ACCOMMODATION.

As in previous years the Health Committee have again taken action with a view to cause proper water-closet accommodation to be provided for insanitary houses situated in courts.

The result of the action, has in many instances, led the owners to approach the Housing Committee, and a mutual scheme resulted in great improvement to the houses in question. In the majority of instances, however, it is obvious that the only remedy is demolition, and the action of the Housing Committee is tending to effect this end.

	1908.	1909.
No. of Privies reported for conversion	6	—
,, converted	5	—
Notices	2	—
,, ,, to provide separate accommodation for court houses	401	925

IMPROVED SANITARY ASHBINS SUBSTITUTED FOR ASHPITS,

This important work has been steadily continued, and as a result, when compared with the corresponding period of last year, there has been an increase of nearly 1,100 bins supplied to replace the old type of insanitary ashpit.

	1908.	1909.
No. of defective Ashpits reported	3,376	1,896
,, Notices	4,124	2,938
,, Improved Sanitary Ashbins supplied	8,493	9,588
,, Ashpits abolished	4,854	4,583

The number of improved sanitary ash-bins supplied in place of old insanitary ashpits is 9,588. In addition, approximately, 1,236 improved bins have been placed in new property, making a total of 10,824 bins.

Up to the end of the year about 81,601 improved Sanitary Ashbins have been fixed; there are still approximately 33,000 ashpits in the City.

REFERENCES FROM OTHER DEPARTMENTS.

	1908.	1909.
Received from the Education Department ...	22,211	23,795
,, City Engineer	9,234	9,231
,, Water Engineer	2,005	2,464
,, Lodging-house Inspectors..	7,303	8,281

The references from the Education Department relate to school children said to be suffering from measles, whooping cough, ringworm, skin disease, neglect, &c.

The references from the other Departments mainly comprise insanitary conditions discovered by officers belonging to those departments, but with which it is not within their province to deal. The City Engineer's Department continues to report defects in private drains brought to light during the process of systematic flushing.

REFERENCES TO OTHER DEPARTMENTS.

A considerable number of conditions ascertained by the Sanitary Staff which did not come within the scope of the Health Department were referred to other departments to be dealt with:—

	1908.	1909.
Referred to City Engineer	10,598	10,132
,, Building Surveyor...	2,164	2,415
,, Water Engineer	6,945	7,995
,, Education Department	26,261	24,303

The references to the Water Engineer comprise mainly, defective fittings, resulting in waste of water; also cases in which the supply was insufficient, owing to various causes.

References to the Education Department chiefly relate to children from infected houses who are attending school, or who are suffering from ringworm, ophthalmia, &c. (See pages 120 and 150).

HOUSE TO HOUSE VISITATION.

The following table indicates the results of the systematic house-to-house visitation by the District Male Staff:—

	1908.	1909.
Number of Inspections of Street Houses	49,633	59,727
,, Street Houses found Clean...	48,141	58,303
,, Apartments in Street Houses Examined .	245,508	289,502
,, Inspections of Court Houses	3,611	4,686
,, Court Houses found Clean...	3,341	4,478
,, Apartments in Court Houses Examined ...	10,857	12,601
Total Number of Houses Examined	53,244	64,413

The gradual diminution in the number of Courts enables a more frequent inspection to be made.

DIRTY HOUSES.	1908.	1909.
Number of Dirty Street Houses Inspected	1,492	1,424
,, ,, Court ,, ,, ...	270	208
,, ,, Cellars Inspected	318	232
,, ,, Houses and Cellars Re-Inspected ...	1,782	1,336
,, ,, Houses and Cellars cleansed on Re-inspection	871	584
,, Notices to Owners to Cleanse Dirty Houses	2,040	1,747
,, Notices to Occupiers to Cleanse Dirty Houses	73	76
,, Notices to Owners to Whitewash Exteriors of Court Houses	1,054	731
,, Informations	30	11
,, Fined	22	4
,, Acquitted or Withdrawn	8	7
Amount of Fines and Costs ...	£13 13 6	£2 5 6

INFECTED HOUSES.

	1908.	1909.
Number of Infected Street Houses (notified cases) ...	8,570	10,858
,, ,, Court ,, (,, ,,) ...	364	427
,, ,, Cellars (,, ,,) ...	69	59
,, visits to infected Houses and Cellars (notified cases)	9,462	10,703
,, ,, ,, ,, ,, (school cases)	11,515	10,688
,, Smallpox and Typhus enquiries ...		4,086
,, Phthisis revisits		2,984

EXAMINATION OF CELLARS AND CELLAR DWELLINGS.

	1908.	1909.
Number of Inspections of Street Cellars	13,118	13,498
,, Street Cellars found disused	514	433
,, ,, ,, used for Lumber, &c. ...	7,467	8,421
,, ,, ,, used as Kitchens	3,766	3,154
,, ,, ,, found illegally occupied ...	162	131
,, ,, ,, ,, legally ,, ...	1,209	1,359
,, Notices issued to Owners	242	235
,, ,, ,, Occupiers	145	142
,, Inspections of Court Cellars	1,248	1,418
,, Court Cellars found disused	90	74
,, ,, ,, used for Lumber, &c. ...	818	938
,, ,, ,, used as kitchens	307	398
,, ,, ,, illegally occupied	33	8
,, Informations against Street Cellar Owners	1	—
,, ,, ,, Court ,, ,,	1	2
,, Fined	1	—
,, of Informations against Street Cellar Occupiers	—	1
,, ,, ,, Court ,, ,,	2	—
,, Fined	1	—
Amount of Fines and Costs ...	£0 5 0	£0 0 0

The number of cellars filled in by the Health Committee, free of charge to the owners during the year is 17, and the total filled in during the last ten years is 315.

The total number of cellars let as separate dwellings at present upon the Register is approximately 1,776.

About 5,328 people are at present housed in cellars.

Cellars occupied as separate dwellings must comply with certain requirements under the Liverpool Improvement Act of 1871, and the Public Health Act of 1875. The requirements of the Act specially relating to Liverpool have been summarised in the report for 1904.

Under the powers of the Liverpool Corporation Act of 1908, the occupation of cellars as separate dwellings, the floors of which are more than two feet below the ground, must cease after December 31st, 1912. All owners ceasing to use cellars legally occupied as separate dwellings before that date may receive some compensation from the Corporation. The cellars, if suitable, may still be used in conjunction with the houses above for the ordinary purposes to which basements are put.

COURT AND ALLEY EXAMINATIONS.

	1908.	1909.
Number of Inspections of Courts and Alleys... ...	42,955	39,685
,, Closets inspected	86,684	80,622
,, ,, found Dirty, but cleansed by Officer's Instructions	38,667	36,214
,, Informations	—	2
,, Fined	—	2
Amounts of Fines and Costs	£0 0 0	£0 7 0

Special and systematic visits to courts and alleys are made with the object of ensuring the cleanliness of the domestic offices and the surface of the courts. The aim is to keep the courts and alleys uniformly clean throughout the week, and with this view the district inspectors are instructed that every tenant in each court is in turn to be held responsible for the cleanliness of the water-closets for a period of one week; the inspector records in his visiting book whose turn it is, and duly informs that tenant. Failing compliance with his requirements, an information is laid under a bye-law, made under the Liverpool Sanitary Act, 1846.

Under the Public Health Acts Amendment Act, 1890, somewhat similar proceedings may be taken.

The attention of the occupiers of court houses has been directed to these provisions by circular, and a marked improvement has resulted.

The courts and alleys continue to decrease in number, owing to the demolition of low-class property for the extension of business premises, or to the removal of insanitary property by the Housing Committee. The number of courts and alleys scheduled for inspection in 1890 was 2,165, in 1895 it had fallen to 1,660, in 1900 it was 1,195, in 1901 it was 1,159, in 1902 it was 1,074, in 1903 it was 1,042, in 1904 it was 976, in 1905 it was 927, in 1906 it was 857, in 1907 it was 825, in 1908 it was 782, and in 1909 it was 698, showing a diminution in nineteen years of 1,467 courts and alleys, of which 278 were demolished during the last five years.

In the months of July to September many of the water-closets were more frequently visited, and throughout the year all courts and alleys having covered entrances were specially washed and hosed down by the scavengers. Under the Liverpool Sanitary Act the exteriors of all courts and alleys require to be limewashed as often as may be necessary. The number of courts requiring limewashing in 1909 was 738, representing approximately 3,963 houses.

COMMON LODGING-HOUSES.

The decline in the number of Common Lodging Houses which has been referred to in previous reports has continued, the removals during 1909 exceeding the additions by 30.

The majority of these were the smaller houses of 7 and 8 rooms, and provided accommodation for navvies, general labourers and sea-going men. There has been a gradual closing of the smaller houses for several years past.

Another feature of note is the continued decline in the number of contraventions of the bye-laws, the total number for the year being only 8, as against 28 during 1908 and 84 in 1907.

It has been pointed out in previous reports that the keepers of the smaller houses were less careful in their management than those in charge of the larger houses, and as a consequence of the decrease in the number of smaller houses the breaches of the bye-laws have also decreased.

At the end of 1908 there were on the register a total (including emigration houses) of 413 lodging-houses, and at the end of 1909 the total number was 383, which furnished accommodation for 12,484 lodgers, besides 932 members of the keepers' families.

During the year 73 houses were given up and removed from the register, and 43 new houses added, leaving the number on the register 383.

In some of the better-class houses for men, separate cubicles are provided for each lodger, the price paid for them varying from 6d. to 1s. 6d. per night. These cubicles are much more appreciated than the ordinary accommodation provided.

The number of what are known as "model" lodging-houses, for men only, upon the register is 153, and these are registered to accommodate 6,642 lodgers, as well as 273 members of the keepers' families.

The term "model" appears now to be used as a trade designation to indicate premises used for the accommodation of one sex only.

There are also 25 registered model lodging-houses for the accommodation of women only. These have rooms for 814 lodgers, in addition to 41 members of the keepers' families.

The visits to lodging-houses are both by day and by night. The night visits are almost restricted to the lower districts and commoner class of house. The lodging and emigration houses of the better class, especially those provided only with single beds for each person, and with no more beds than are equivalent to the number of lodgers allowed, are only occasionally visited at night, unless special circumstances necessitate a closer supervision.

Persons harbouring lodgers in unlicensed premises receive a notice to apply to have the rooms measured and licensed. There was 1 such notice issued during the year.

The number of day visits paid during the year was 19,501, and the night visits 1,213. During the preceding year the day visits were 20,579, and the night visits 1,082.

Eight informations were laid against keepers of common lodging-houses during the year for the following offences:—

	1908.	1909.
Not sweeping floors	12	3
Not washing floors	10	3
Overcrowding	5	1
Receiving lodgers in unlicensed rooms ...	1	1
Total	28	8

Convictions followed in 7 cases, the total amount of fines amounting to £1 3s. 0d., and ranging from 1s. 6d. and 1s. 6d. costs to 2s. and costs. During the preceding year there were 27 convictions, and the fines amounted to £4 19s 6d.

One case was dismissed.

The number of lodging-houses found dirty was 93; in each case notices were served to limewash and cleanse the premises. All the notices were complied with.

The Bye-laws require that every case of infectious sickness in a common lodging-house should be at once reported to the Medical Officer of Health. Thirty-nine cases of infectious sickness occurred in lodging-houses; all the cases were removed to hospital immediately. In all cases the bedding was removed to the disinfecting apparatus, and the rooms purified and cleansed. There were 25 deaths from non-infectious diseases in lodging-houses; 11 of the deceased persons belonged to the keepers' families, and 14 were lodgers.

The condition both of labour and lodging-accommodation of the Chinese was brought into prominence during the year 1907, and a Committee of Inquiry was appointed, which had several meetings and extended its investigations over several weeks.

The Chinese lodging-houses, which have for many years been visited regularly by day and by night, are exceedingly well kept, clean and orderly, notwithstanding that most of the properties are very old. Overcrowding is extremely rare. The Chinese, as a rule, pay every regard to sanitary requirements, and the children of the married Chinese are always well clad and cared for, and very kindly treated.

Considerable difficulty has been occasioned during the winter months by the misdirected efforts of well-intentioned people to provide free shelters for men. Usually premises eminently unsuitable for the purpose are selected, a public appeal is made, and a part of the funds received are devoted to offering shelter and food in these establishments. Commonly these premises are devoid of sanitary conveniences, water-supply, &c., but they attract to them numbers of those lodgers from the lower class of lodging-houses, who are content to put up with the discomfort if they receive lodgings and food free. The reports of the night inspectors show that the atmosphere of these places becomes excessively foul, as the places are frequently overcrowded, and there is no doubt that risk of spread of infection is increased. Moreover, the registered lodging-house keepers complain very much of the loss of their lodgers and of their incomes by the opening of the free shelters. It would be far better if the charitably-disposed persons would subsidise some of the registered lodging-houses, rather than to permit their money to be mis-spent in connection with unsuitable premises.

LODGING-HOUSES FOR WOMEN.

Considerable attention was again paid during the year to the proposal that the Corporation should provide an additional Common Lodging-house for women. Various deputations waited upon the Housing Committee, and reports and other information were furnished to that body. The Committee visited and inspected many of the common lodging-houses.

The Medical Officer reported that the first common lodging-house for women registered in Liverpool was No. 45, Everton Brow, which was opened in 1887 for 66 lodgers, but this number was subsequently reduced to 45. It has always been a respectably conducted and respectably tenanted house. A few others of a similar kind were opened during the next few years, and are still in use.

In 1893-4 there was an accession to the number of lodging-houses for women by the opening of houses occupied mainly by prostitutes. It was in these years that the Watch Committee, stimulated by strong public opinion, caused action to be taken against the numbers of immoral houses scattered all over the town to its great nuisance and detriment. The places were suppressed and the women ejected. Many of these women congregated in particular localities, and the houses in which they sought shelter were placed under registration and sanitary supervision, thus effectually preventing immorality within their walls and restricting the mischief within comparatively narrow limits. The character of these places was well known at that time, and it is well known to-day. Happily, the number of these houses has diminished, from causes presently alluded to.

In subsequent years, however, more lodging-houses of an entirely different character to the foregoing have been opened for the poorer class of women, but it is not to be doubted that from time to time immoral women may have found their way into them, as they may into any other public lodging-house or hotel for whatever class. But in order to safe-guard the character of these houses as far as possible, careful inquiries are made into the character of the persons desiring to keep them, and the Head Constable is invariably asked if he has anything whatever to say against them. Only persons of good character are given permission to keep common lodging-houses for women; they are resorted to by poor people who are honest, decent, and industrious, but whose poverty and



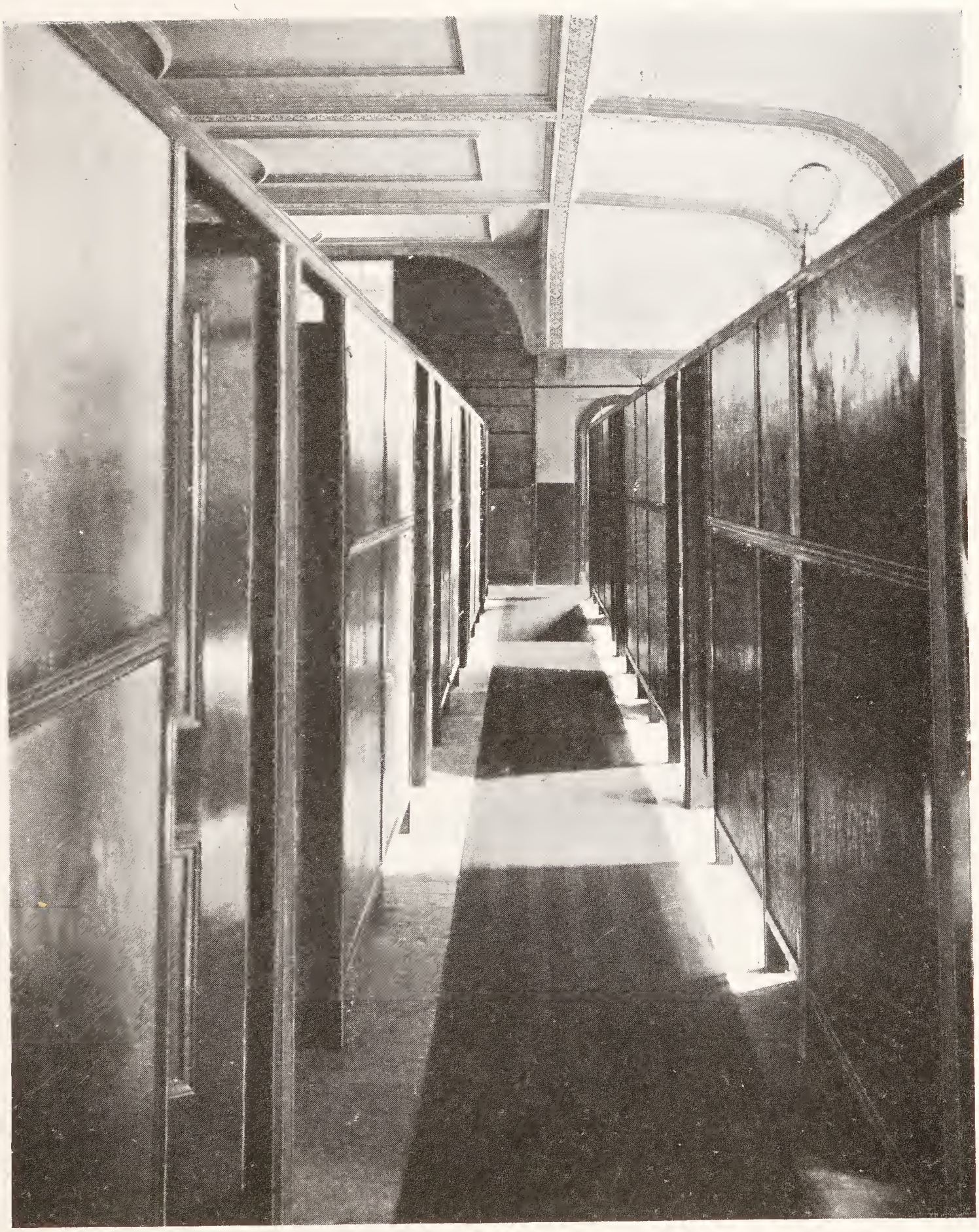
"ANN FOWLER" MEMORIAL HOME.
Common Lodging House for Women. 150 Beds. 4d. and 6d. per night.





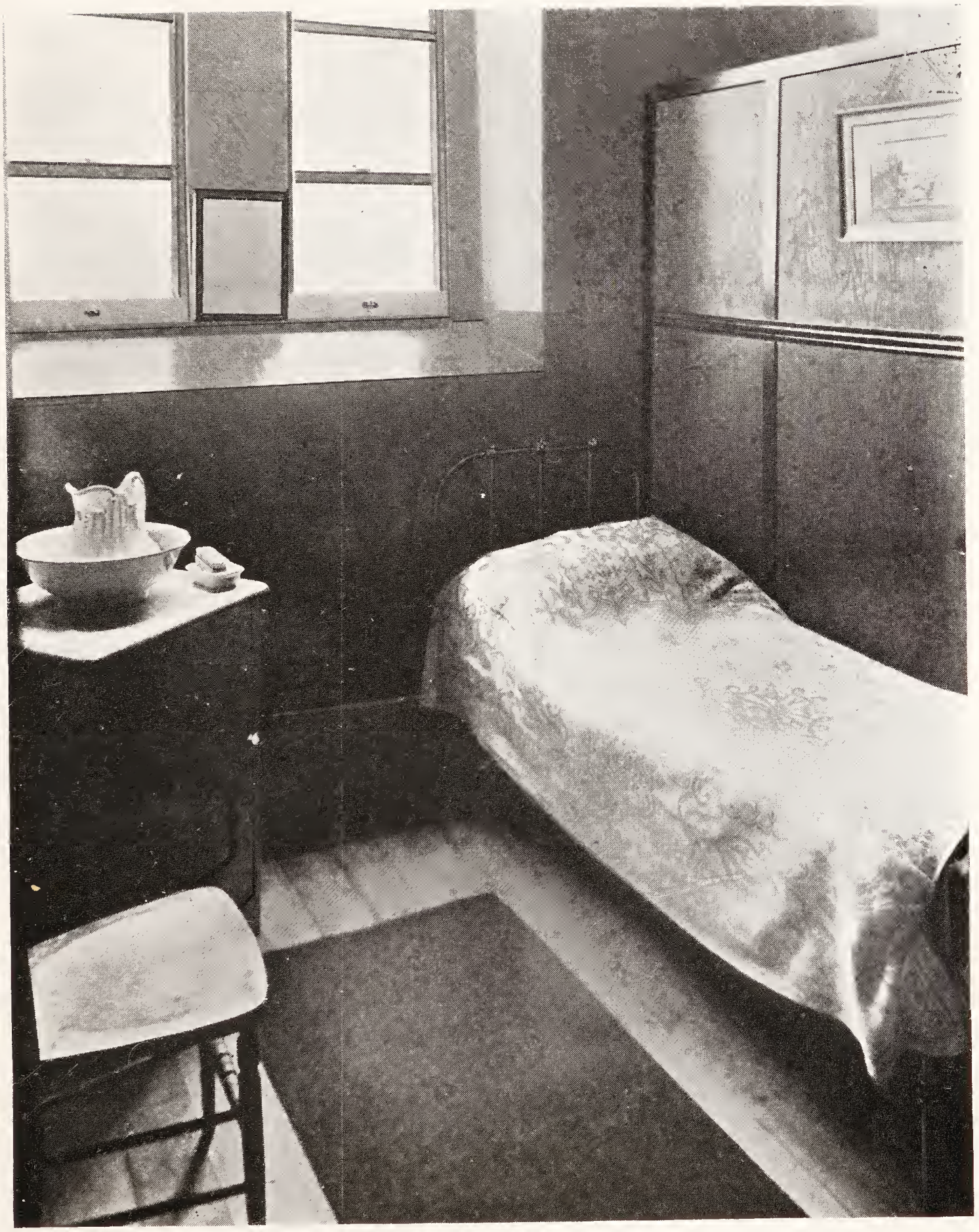
"ANN FOWLER" MEMORIAL HOME.
Interior of Dormitories.





"ANN FOWLER" MEMORIAL HOME.
Corridor, with entrance to Cubicles.





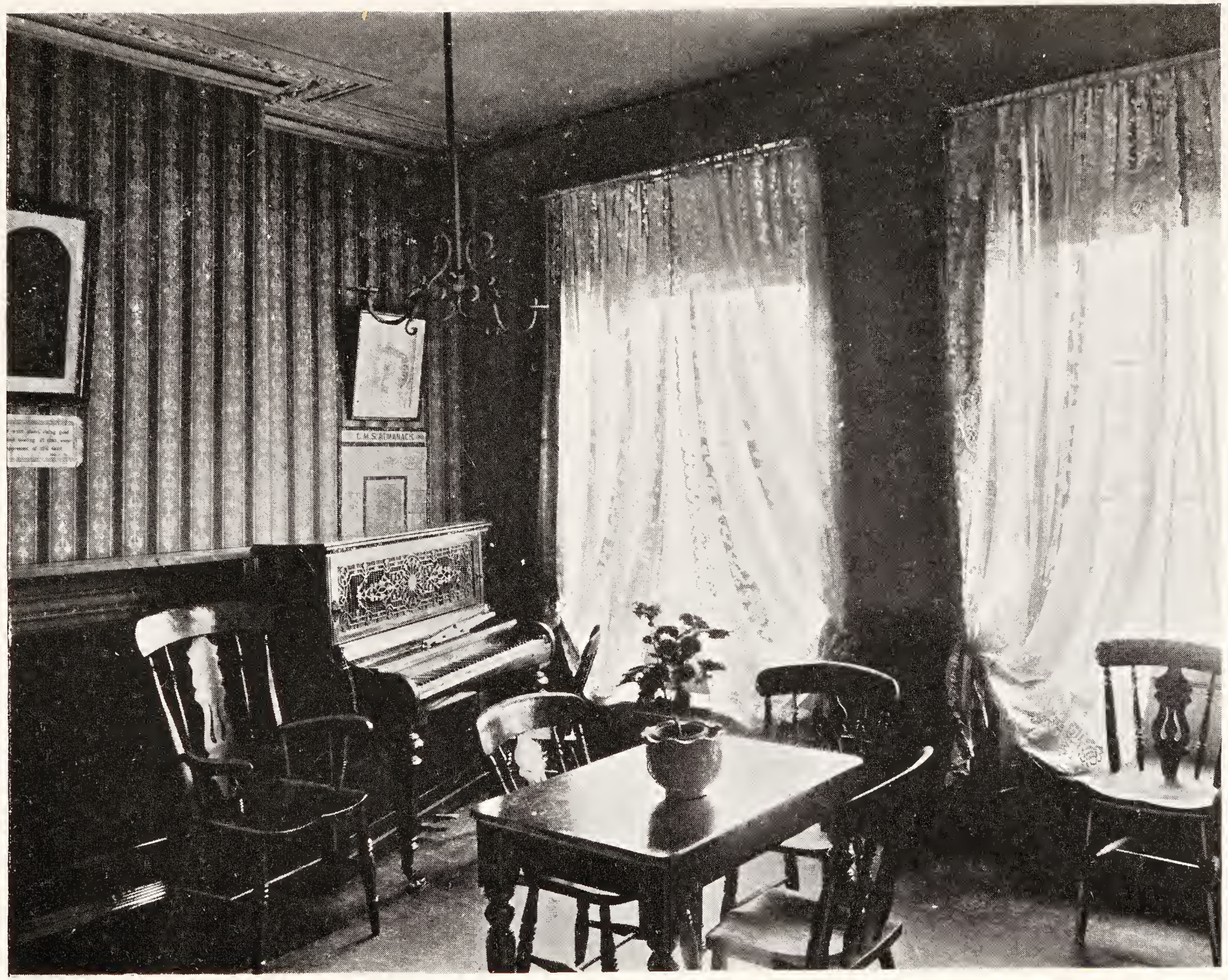
"ANN FOWLER" MEMORIAL HOME.
Interior of Cubicle.
(Contrast this with illustration marked ** facing page 258.)



"ANN FOWLER" MEMORIAL HOME.
Lavatory Accommodation.



COMMON LODGING HOUSE FOR WOMEN, EVERTON BROW.
Sitting-room Accommodation.
45 Beds. 4d. per night.



COMMON LODGING HOUSE FOR WOMEN, EVERTON BROW.
Reading and Recreation Room.
80 Beds. 3d. per night.



COMMON LODGING HOUSE FOR WOMEN, EVERTON BROW..
Lavatory and Bath Accommodation.



COMMON LODGING HOUSE FOR WOMEN, ISLINGTON.
30 Beds. 6d. per night.



COMMON LODGING HOUSE FOR WOMEN, ISLINGTON.
Interior of Sitting Room.





COMMON LODGING HOUSE FOR WOMEN, ISLINGTON.
Interior of Bedrooms.



COMMON LODGING HOUSE FOR WOMEN, ISLINGTON.
Lavatory Accommodation.



social condition enables them to pay but a very modest sum, and they are satisfied with but poor accommodation. The keepers of these houses are, some of them poor, and make but a poor income, and consequently have little to spend on improving the condition of the houses which they rent. The houses themselves, many of them old in fabric, are always kept clean, and the sanitary conveniences in many have of late been improved.

They are almost all kept and supervised by women, five are kept by men whose wives act as deputies, and in the remaining two, female deputies or supervisors are employed.

In addition to houses of these classes there is at the present time a large number of houses, some of them admirable in their kind, which provide accommodation exclusively for women, and which are directly or indirectly under the supervision of various religious denominations, such as Church of England, Salvation Army, Wesleyan, Roman Catholic, Hebrew, or are promoted by private philanthropic effort. Photographs of some of these are shown.

A number of empty beds is always found, notwithstanding that last year several lodging-houses for women were given up.

The Housing Committee in considering the alleged necessity for themselves providing common lodging-houses for women have had the advantage of visiting a large proportion of the various descriptions of common lodging-houses already provided; they have also received deputations upon the subject, and have endeavoured to ascertain from those deputations what it is precisely that the deputation wished for in regard to the class of women to be catered for by the Corporation, the desired locality of the house, or houses, their sizes, and the prices to be charged for accommodation. The views of the members of the deputations have been conflicting, and the absence of unanimity has increased the difficulty of arriving at any conclusion upon these heads.

The Housing Committee have satisfied themselves that women's lodging-houses opened by business enterprise have been far from fully

used, that consequently some have been closed as financial failures, some have been converted into houses for men, and the remainder are very rarely, if ever, fully occupied even for short periods.

The houses provided under religious or philanthropic support are also found to have a large margin of unused accommodation. It is urged, however, against this class of house that the inmates may, if they choose, attend some religious service either at the beginning of the day or at its close; they are not in all cases asked to attend the service, and if they do not wish to attend they can stay away from it. These facts are important, as some members of some of the deputations leaned to the view that the women object so strongly to the element of worship introduced, or to the form of it, that in the alternative of the choice between the philanthropic establishment and the establishment in which it was possible that immoral women may reside, they would have a distinct preference for the latter; others of the deputation appeared sanguine enough to think that a common lodging-house run by the Corporation would under no circumstances be open to an immoral woman, and would be free from disciplinary restrictions.

The Housing Committee have been urged to provide a Municipal Common Lodging-house for, amongst others, women arriving by boat or rail, and in support of this they have had before them a long report from Miss Rose, of the National Vigilance Society, who states that in the course of ten months the Society had to find temporary accommodation for 37 young women, and that she believes that, including cases she does not know of, the number would reach a hundred in the course of a year. Miss Rose admits, however, that she has always succeeded in placing these women satisfactorily, and again and again the Housing Committee have been assured by the keepers of some of the philanthropic houses that no woman is ever refused at any time.

The work of the Vigilance Society is undoubtedly good and useful, but Miss Rose's tone is unfortunate in reference to the persons described as touts. It is possible that she may have misinterpreted the motives of the agents of the various shipping and other companies, who merely desire to seek business, and to facilitate the objects of the travellers, and are not endeavouring to compass their destruction.

The lodging-houses to which she alludes are known to be respectable places, and indeed it is admitted that the Vigilance Society itself has sent

lodgers to some of them. The references to the Salvation Army are regrettable. The day is passed for expressions of the kind in connection with the work of the Salvation Army.

As the keepers of the boarding-houses alluded to have always been regarded as respectable citizens, it would be interesting to know, in their interests as well as those of the Vigilance Society, how often and when and with what result complaints have been addressed to the Watch Committee, the Head Constable, or to any other person in authority, either by Miss Rose or by other persons, concerning the alleged misconduct of these persons in endeavouring "to get hold of these girls" for the purposes alleged, and what, if any, action was taken in the matter.

The Committee will have realised from their own investigations that the suggestion that a respectable girl desiring lodging accommodation in Liverpool would necessarily have to enter a prostitutes' lodging-house has no foundation in fact, and so far as this aspect of the question goes the matter may be dismissed.

Turning to the inquiry as to the other classes of girls for whom the Corporation are asked to provide, and to other reasons for making provision, the deputation which last waited upon the Committee very strongly reiterated the view that a Municipal Lodging-house should be provided for café girls, shop girls, servants, improvers in dressmaking who receive but a few shillings a week, travellers, charwomen, and basket women, and that the charge should be from 4d. to 6d. per night; furthermore, it was urged that some grading in accordance with age should be insisted upon, young women being separated from old women. This latter recommendation appears to be based on moral considerations which involve the assumption that old women are necessarily immoral, and thereby endanger the young ones. The old women, however, are not always immoral, and, indeed, their age and experience may exercise a good and restraining influence upon the young; there would be obvious disadvantage in separating perhaps the mother from the daughter.

The Committee had a very ample opportunity to form its own opinion whether the promiscuous association of girls and women of such wide

social variety as café girls, shop girls, servants, improvers in dressmaking, travellers, charwomen, and basket women, would result in benefit to the girls or women themselves, and the Committee will also be the best judge as to the wisdom of inviting young shop girls and "improvers" earning but a trifling wage, to leave cheap, respectable and comfortable lodgings in a private home which they may be in at the present time, to go to a Municipal Common Lodging-house

The Housing Committee saw the character and extent of the accommodation available for the needs of women of every religious denomination, and no opposition was expressed to the opinions of the Medical Officer, who could not assent to the view that the religious observances are so intolerable or their forms so repugnant as to necessitate municipal interference.

The Committee, which devoted so much time and attention to the consideration of the subject realised that there are women whose lodging accommodation would improve if they could afford to pay a higher rental for it.

The deputations which have been received by the Committee included several ladies and gentlemen of considerable experience in various lines of public service, but owing to the want of precision in the views put forward, the absence of unanimity as to the class to be catered for, the numbers to be provided for, the localities of the houses, and so forth, it is impossible to make any suggestion which could meet their views, even if it were right to assume that the information upon which those views were based is correct.

It must be remembered that the lodging-houses which are known to be used by immoral persons are diminishing, a diminution largely owing to the work of the various religious and philanthropic agencies, whose methods of conducting their women's homes have been so adversely reflected upon by some members of the deputations.

The following is a list of "Common Lodging-houses" for women now on the register:—

No.	Street.	Keeper.	Deputy Keeper.
	Netherfield Road South. Ann Fowler Memorial Home.	Florence Booth	Matron and Assistants.
157	Islington	Marie Firth	Female Assistant.
46a	Everton Brow	Rev. Herbert Wood	Matron and Assistant.
44a	,, ...	,, ...	,, ,,
45	,, ...	Edward Boreland ...	Female Assistant. .
35	Kempston Street	Elizabeth Buckley ...	,, ,,
79	,, ...	Margaret Ryan	Keeper's daughter.
89	,, ...	Richard Baines	Female Assistant.
94	,, ...	John Kelly	Keeper's Wife.
28	Wilton Street	Margaret Ryan	Female Assistant.
17	,, ...	Ellen Phillips	Keeper's Daughter.
87	Soho Street	Rose Dacy	Female Assistant.
89	,, ...	,, ...	,, ,,
71	,, ...	Ellen Phillips	,, ,,
114	,, ...	Richard Baines	,, ,,
16	Queen Anne Street	Ellen Edwards	,, ,,
8	Prince Edwin Street	Ernest Wight	Keeper's Wife.
10	,, ,, ...	,, ...	,, ,,
121	Richmond Row	Thomas Laneaster ... and Wife.	,, ,,
123	,, ,, ...	,, ...	,, ,,
165	,, ,, ...	Maria Baines	Female Assistant.
36	Circus Street	Martin Carroll	Keeper's Niece.
31	Baptist Street	,, ...	,, ,,
22	Springfield	Robert Todd ..... and Wife.	Female Assistant.
3	Trinity Place	,, ,, ...	,, ,,

IMPROVEMENTS IN SANITARY ACCOMMODATION.

The following is a list of women's and other common lodging-houses where structural alterations have been carried out with the view of improving the kitchen and washing accommodation, as well as the sanitary arrangements:—

No. 58, Richmond Row.—Light and ventilation to cellar kitchen improved; new wash-house provided and five new wash-basins fixed.

No. 35, St. Anne Street.—Trough closets removed; four new water-closets erected, and two new wash-basins fixed.

No. 14, Wilton Street.—Trough closets removed; four new water-closets erected, and four new wash-basins fixed.

No. 31, Everton Brow.—Trough closets removed; three new water-closets erected, and five new wash-basins fixed.

No. 98, Soho Street.—Trough closets removed and three new water-closets erected.

Nos. 1 and 2, Kent Square.—Trough closets removed, five new water-closets erected, and three new wash-basins fixed.

No. 3, Trinity Place.—Three new wash-basins fixed.

No. 71, Soho Street.—Trough closets removed, three new water-closets erected, bath, with hot and cold water service, and three new wash-basins fixed.

SEAMEN'S LICENSED LODGING-HOUSES.

The Corporation have made Bye-laws, with the sanction of the President of the Board of Trade, for the licensing of Seamen's Lodging-houses, under the Merchant Shipping (Fishing Boats) Act, 1883, Section 48.

Applications from the keepers of Registered Common Lodging-houses for licenses authorising the designation of such Registered Common Lodging-houses as Seamen's Licensed Lodging-houses, are infrequent, only six such licensed lodging-houses now being on the register; these provide accommodation for 140 seamen.

One license was given up during the year.

The number of licenses granted since the adoption of the Seamen's Licensed Lodging-house Bye-Laws is 32.

It has not been found necessary to institute proceedings under the bye-laws in question.

Some years ago the holders of licenses to keep Seamen's Lodging-houses were authorised by the Board of Trade to board vessels and seek for lodgers, and while this privilege was granted there was an advantage in holding such a license, but that privilege being now withdrawn, it does not appear that there is any advantage to the keeper of a common lodging-house to have his premises registered as a Seamen's Lodging-house, and hence probably the small number upon the register.

SUB-LET HOUSES.

These are houses, certain rooms of which are let off to members of more than one family. The bye-laws provide for the registration and inspection in order to prevent overcrowding, and to ensure attention to cleanliness and sanitary requirements.

The supervision of sub-let houses and the prevention of over-crowding and other breaches of the bye-laws constitute an important branch of sanitary administration.

There is a slight decrease in the number of these houses now on the register, the number at the end of the year, 19,654, contrasting with 19,776 at the end of 1908, a decrease of 122.

The number added to the register during 1909 was 373; the number cancelled owing to their being no longer sub-let was 281. The number returned as demolished was 214, making a total on the register on the 31st December, 1909, of 19,654, as against 19,776 at the close of the preceding year.

DAY VISITS AND GENERAL CLEANLINESS.

The systematic visitation by day has been fully maintained, the number of day visits paid, 100,090, being an increase of 4,907 visits over the previous year; and the result has been a general improvement in the cleanliness of the rooms, stairs and passages of these houses.

The number of offences arising from neglect to cleanse floors, stairs, &c., was 384, as against 541 during the previous year, a decrease of 157 cases.

NIGHT VISITS AND OVER-CROWDING.

The night visits also show an increase in number of 460 as compared with 1908.

Cases of over-crowding were less numerous than in previous years, the number of convictions being 576, as against 738 in 1908 and 962 in 1907.

There has been a steady decline in the offence of overcrowding during the last five years. The percentage of convictions to the number of visits was 6·90 in the year 1905; during the year under review it was only 2·44. (See table, page 107.)

A number of acquittals may be attributed to what appears to be a desire on the part of the Magistrates dealing with these cases to be lenient with defendants on their first appearance. The offences were not denied, but the defendants pleaded extenuating circumstances, such as sickness, poverty, and lack of employment.

In all cases where overcrowding is found by the inspectors, the inmates are either served with a printed notice or verbally cautioned, and given every opportunity for improvement prior to the visits upon which information for breaches of the bye-laws are made.

The number of visits paid to sub-let houses during the day was 100,090, and during the night 23,534, with the result of finding 771 rooms over-crowded. In addition to over-crowding, 193 cases of indecent occupation came under the notice of the inspectors, as against 188 last year. The character of the indecent occupation may be judged of from the following facts:—In 78 instances one man and two women were found in the same bedroom; in 59 instances two men and one woman; in 18 instances two men and two women; in 16 instances one man and three women; in 19 instances three men and one woman; in 2 instances three men and two women; and in 1 instance two men and six women. These cases appear to be the outcome of ignorance and indifference, and not of immoral intent. Under the bye-laws a number of persons have been fined for mixing sexes, and a number, who cannot be reached under the byelaw, cautioned by the inspectors.

Informations were laid against 1,044 chief tenants and lodgers (room-keepers) for breach of the bye-laws, viz. :—

Overcrowding	614
Floors not washed	178
Floors not swept	31
Not cleansing stairs, &c.	175
Mixing sexes	46
Total	1,044

Five cases were withdrawn, thirty-one cases acquitted, and in eleven cases the defendants had left the premises before the summonses could be served.

As the result of proceedings before the Stipendiary and other Magistrates, fines were inflicted as follows:—65 fined 6d. and 6d. costs; 82 fined 1s. costs; 1 fined 2s. costs; 525 fined 1s. and 1s. costs; 222 fined 1s. 6d. and 1s. 6d. costs, 61 fined 2s. and 2s. costs; 34 fined 2s. 6d. and 2s. 6d. costs; 6 fined 5s. and 4s. 6d. costs; 1 fined 10s. and 4s. 6d. costs; making a total of fines levied during the year of £117 10s 6d.

Offences against the bye-laws have been less than in the preceding year.

Nine cases of overcrowding were in respect of premises in the district of Garston, compared with 38 last year.

Increased supervision results in fewer offences against the bye-laws, and a higher standard of cleanliness in the houses.

The regular and systematic visitation of these houses which has been carried out during the past two years has had a most beneficial effect in diminishing the number of cases of overcrowding and indecent occupation of bedrooms, and also in obtaining a higher standard of cleanliness. Cases

arising from neglect to cleanse rooms, stairs and passages, are in a great many instances associated with drinking habits and the accompanying indifference to cleanliness and comfort.

The practice by which the Inspectors of Sublet Houses visit the Corporation Dwellings still continues. The complaint in the first instance is usually received from the Manager of the Dwellings, and the usual proceedings follow.

The total number of offences against the bye-laws for this year was 1,044, being 296 less than the number last year, which was 1,340, and 701 less than the year 1907.

The gradual diminution in overcrowding led the Health Committee in 1901 to amend the bye-laws relating to sub-let houses, and the City Council, with the sanction of the Local Government Board and on the recommendation of the Health Committee adopted amended bye-laws, which amongst other important provisions contained clauses providing that every lodger above 10 years of age shall have not less than 400 cubic feet of air space, and every person below 10 years of age shall have not less than 200 cubic feet, but if the room is used as a day-room as well as a bedroom, then every inmate must have at least 400 cubic feet. Under the previous bye-law a space of 350 feet only was required, and two persons under twelve were regarded as one adult.

The new bye-laws came into operation on the 30th January, 1901. One result of these bye-laws—which required so relatively large an addition to the cubic space allowed for each lodger—was to put an entirely new definition upon the offence of overcrowding, and although the great majority of people quickly appreciated the effect of the new bye-laws, yet there was necessarily a considerable increase in the number of persons proceeded against for overcrowding amongst those who neglected to comply with the altered provisions.

The following table shows the number of sub-let houses on the register, the number of night visits for the detection of overcrowding, the number of convictions for overcrowding, and the percentage of convictions to the number of visits for the past nine years, *i.e.*, since the application of the new bye-laws :—

Year.	No. of Sublet Houses.	No. of night visits for detection of overcrowding.	No. of convictions for overcrowding.	Per centage of convictions to number of visits.
1901	18,917	17,863	1,351	7·56
1902	19,976	17,274	1,150	6·65
1903	21,719	18,438	1,264	*6·85
1904	22,488	17,886	1,148	6·41
1905	20,518	19,193	1,326	6·90
1906	19,714	18,838	920	4·88
1907	19,832	22,982	962	4·18
1908	19,776	23,074	738	3·19
1909	19,652	23,534	576	2·44

The bye-laws as to houses let in lodgings, or occupied by members of more than one family, have been inserted in previous reports.

* This includes the added area of Garston.

The Building Surveyor has kindly supplied the following table :—

NUMBER OF HOUSES ERECTED AND TAKEN DOWN DURING THE YEAR ENDING DECEMBER, 1909.

DISTRICTS.	Number erected.	Number taken down
Scotland	114	62
Exchange	—	154
Abercromby	8	21
Everton	4	—
Kirkdale	—	1
West Derby (West)	—	—
Toxteth	97	34
Walton	772	1
West Derby (East)	456	2
Wavertree	365	3
Sefton Park	78	—
Garston...	192	2
Fazakerley	63	—
Totals	2,149	280

The City Engineer has kindly supplied the following :—

Number of cellars filled in and bricked up during 1909 17
,, ,, ,, ,, the last 10 years ... 315

SEWER VENTILATION TO END OF 1909.

Number of 9-inch by 6-inch, 9-inch, 6-inch, 6-inch by 4-inch, 4-inch by 4-inch, 4-inch, and 3-inch Iron Pipe Ventilating Shafts 1,835
Number of Street Ventilating Manhole Covers and Gratings 6,615

CANAL BOATS.

The number of inspections of canal boats during the year was 5,889, and the condition of the boats and their occupants, as regards matters dealt with in the Acts and Regulations, is indicated by the following information :—

Sixteen boats, not registered by their present owners, were found to be used as dwellings. Written notices were sent to the owners in 13 cases, and 3 verbal notices were given. All the notices were complied with.

Eight boats were found without certificates on board. Notices were sent to the owners in each case. All the notices were complied with.

Twenty-one boats were found without the registered number painted on both sides of the boat. Notices were sent to the owners in 20 cases, and 1 verbal notice was given. The omission has been rectified in each instance.

In 3 cases defective second bulkheads were reported. Notices were sent to the owners in each case and the defects remedied.

In 30 boats the cabins required re-painting. Notices were sent to the owners in each case, and 28 were complied with. Two boats have not been seen in the district since.

Dirty cabins were reported in 11 cases. In 7 cases verbal notice was given to the masters, and in others written notices were sent to the owners. In 10 cases the notices were complied with, and 1 not being complied with an information was laid against the master, and a fine inflicted. The cabins were subsequently cleansed.

Besides the foregoing there were 49 instances of infringements of the Acts and Regulations caused by leaky decks (20), general leaky condition of boat (5), broken lids to lockers (3), broken scuttle covers (2), defective ventilation (3), broken floors (3), no water casks on board (7), defective stoves (5), removal of bilge water (1). Forty-eight notices were sent to the owners in respect of the above infringements. Forty-seven of the notices were complied with, and 1 has not been re-inspected.

Informations were laid in 4 cases, viz., dirty cabins (1), overcrowding (1), non-separation of sexes (1), not painting cabin (1). In 3 cases fines were inflicted, varying from 2s. 6d. and 2s. 6d. costs to 20s. and 4s. 6d.

costs, and in 1 case the information was dismissed, viz., non-separation of sexes. The total amount of fines was £1 14s. 6d.

No case of infectious sickness occurred on the canal boats during the year.

The entire number of infringements of the Acts and Regulations referred to in the Report occurred on 112 boats, in several instances the offence being repeated on the same boat.

Nineteen notices were sent to the Education Committee of 23 children living on canal boats and not attending any school.

The number of boats on the register is 568. This number includes twelve boats that cannot be traced. It is probable that the boats which cannot be traced have been broken up or have left the district, but in the absence of definite evidence of this the boats remain on the register. Sixty-two boats have been removed from the register, as it was ascertained that 37 had been broken up, 10 had left the district, the registration of 13 boats cancelled on account of the death of the registered owners, and two boats have been sunk and not raised. During the year 27 new boats were registered, and seven re-registered on account of changes of owners, and three re-registered on account of change of owners and name of boat. All boats re-registered on account of change of owners or the name of the boat being changed, or on account of structural alterations, retain their original numbers. Copies of the registration certificate were issued to the owners of four boats, owing to the original ones being worn out.

In 1898 the Canal Boat Inspectors were appointed as Port Sanitary Inspectors—an appointment which authorised them to inspect all classes of boats, as a difficulty arose in regard to certain boats plying upon the canal which were not registered under the Canal Boats Acts, but which had been registered by the Board of Trade under the Merchant Shipping Act. Thirty-three visits were made to boats of this class, and all were found correct.

In 1903 the Port Sanitary Inspectors were appointed as Canal Boat Inspectors. This appointment authorised them to inspect canal boats which ply to and from the docks, and on the river. During last year these Inspectors made 769 visits, which are included in the foregoing report. The number of contraventions for which notices were served on the owners was 55 on 39 boats.

SMOKE NUISANCES.

Proceedings for the abatement of Nuisances caused by the emission of excessive smoke from factory chimneys or from steamers, were taken under the Liverpool Sanitary Amendment Act, 1854, sections 24 and 25, the Liverpool Improvement Act, 1882, section 77, and the Liverpool Corporation Act, 1902, section 57, with the following results:—

	1908.	1909.
Number of reports of excessive smoke from Manufactories ...	176	149
,, ,, ,, Steamers in river	262	252
,, ,, ,, ,, dock	24	28
Total	462	429

Admonished by the Health Committee or written to in respect to nuisances caused by the emission of excessive smoke:—

	1908.	1909.
Manufacturers	10	9
Steamship Owners	7	11
Total	17	20

	1908.		1909.	
Chief Inspector and Assistants gave M'facturers	358	Cautions	381	Cautions
,, ,, ,, Steamship Owners	90	,,	70	,,
Total... ...	448	,,	451	,,

	1908.	1909.
Number of enquiries respecting Owners	438	430

	1908.	1909.
Informations against Manufactories	168	149
,, ,, Steamers in river...	199	198
,, ,, ,, dock...	22	21
Total	389	368
Acquitted or withdrawn, Manufactories	4	2
,, ,, Steamer cases	2	1
Total	6	3

	1908.	1909.
Fined, Manufactories	164	145
,, Steamers	219	218
Total	383	363

	1908.	1909.
Amount of Fines, Manufactories ...	£350 3 0	£305 16 6
,, ,, Steamers ...	414 14 1	395 10 9
Total ...	£764 17 1	£701 7 3

It is the duty of the Police to deal with nuisances arising from the firing of domestic chimneys.

SMOKE INSPECTION.

The falling off previously noted in the number of reports relating to excessive smoke still continues, and is an indication of the additional care exercised by manufacturers and steamship owners.

The efforts made by manufacturers to diminish the emission of excessive smoke from the chimneys of their respective works has led them in several cases to adopt a form of mechanical furnace known as the "sprinkler," combined with a system of forced draught. Wherever such a combination has been installed it has caused a very fine, charred, gritty dust to be sent out from the chimney.

Unlike smoke, this dust cannot be seen while it is actually issuing from the chimney, and very careful observations have, therefore, to be taken by the Inspectors, so as to definitely determine the source from whence it comes.

In each case where a complaint has been made the source of the annoyance has been successfully traced, and various means have been

adopted to prevent it, such as the provision of dust chambers and water-lutes in the flues, with appliances for frequent cleansing; but the most lasting benefit has accrued where the use of the type of furnace alluded to has been discontinued.

Out of 252 cases of excessive smoke from Steamers in the river which were observed, 48 vessels were bound for foreign ports, the owners of one Steamer could not be traced, and one was towing another vessel in emergency, and consequently no proceedings were taken.

In seven cases of excessive smoke from foreign trading Steamers in dock, no proceedings were taken but the owners were written to.

	1908.	1909.
Complaints received of smoke from defective house flues, and from low chimneys	139	142
Visits relating thereto	809	880
Chimneys raised in consequence of complaints	40	26
Flues altered and repaired	31	18
Attention promised	56	92
Referred to other departments	3	5
Frivolous complaints	9	1
Dust Screens provided	—	—
Total complaints dealt with... ...	139	142

The smoke in our atmosphere is very largely contributed to by the combustion of coal in domestic firegrates, steam boiler furnaces, and other furnaces used for manufacturing processes.

It is a common error to lay the blame of the pollution of the atmosphere by smoke entirely upon the factory chimney, and this is no doubt due to the fact that it is more easily noticeable than the individually small quantities of smoke which are emitted from the chimneys of dwelling-houses, and which reach a very large amount in the aggregate.

OFFENSIVE TRADES.

Applications for permission to carry on the following offensive trades were made during the year, and a report by the Medical Officer of Health on each application was submitted to the Health Committee:—

Premises.	Business.	Granted.	Refused.	Date, 1909.
141, Vauxhall Read ...	Fat and Tallow Melting and Gut Scraping	1	—	14th Jan.
5, Phillips Street	Fat Boiling and Tripe Dressing	1	—	11th Feb.
45. Westmoreland St...	Soft Soap Making	—	1	4th Mar.
79, West Derby Road..	Gut Scraping	—	1	29th April.
— Maguire Street	Soap Making.....	1	—	17th June.
83, Rose Place	Tripe Boiling	1	—	1st July.
— Mawdsley Street ...	Bone and Dried Blood Grinding	1	—	29th July.
1, Hughson Street.....	Soap Making.....	—	1	23rd Dec.
	Total.....	5	3	

In cases in which permission is granted, conditions are imposed requiring that the premises be put in proper order to the satisfaction of the City Engineer, Building Surveyor and Medical Officer of Health, that no public or private nuisance be caused, and that the business be discontinued whenever the Council shall so require.

The number of inspections of premises where offensive trades are carried on was 1,616, as against 1,296 in 1908.

		1908.	1909
Total No. of Visits to	Bone Boilers	126	170
,,	Fell Mongers	34	56
,,	Soap Boilers	233	222
,,	Fat and Tallow Melters	244	322
,,	Tripe Boilers	154	221
,,	Gut Scrapers	106	148
,,	Ham Cooking and Potted Meat Works	59	69
,,	Patent Manure Manufacturers ...	16	28
,,	Tanneries	89	110
,,	Knackers' Yards	141	130
,,	Paint and Resin Works	21	33
,,	Palm Oil Works	16	15
,,	Cotton Seed Oil Works	23	34
,,	Sulphuric Acid Works	20	20
,,	Liver Boilers	1	—
,,	Butter Substitute Manufacturers ...	11	1
,,	Preserved Skin Works	2	—
,,	Lard Refiners	—	37
	Total...	1,296	1,616

KNACKERS' YARD, CARRUTHERS STREET.

THE ANIMAL SLAUGHTERING CO.

The Health Committee have licensed the above Company and premises to destroy carcases of animals affected with contagious disease in accordance with the Orders of the Board of Agriculture and Fisheries.

Carcases of diseased horses and cattle are destroyed under the supervision of an Inspector of the Public Health Department at the Knackers' Yard, where specially tested iron pans with covered lids have been erected for the purpose. The carcases are placed in the tanks intact, sulphuric acid added, and steam applied until a temperature of 250° to 260° Fahr. is reached. An exhaust pipe conveys steam and all offensive odours to the furnace, thus preventing any nuisance arising.

Unsound meat is destroyed on these premises in a similar manner.

The carcases of horses which are destroyed on account of old age or minor complaints are also dealt with on these premises.

The following are the Returns for 1909 :—

Horses Destroyed.	Horses taken in Dead.	Asses Destroyed.	Cows Destroyed.	Other Beasts.	TOTAL.
233	1,756	27	144	—	2,160

MARINE STORES.

	1908.	1909.
Number of Visits by District Sanitary Inspectors ...	1,424	1,464

(For visits by Workshop Inspectors, see page 132).

COMMON HOUSE FLY.

On the instructions of the Health Committee further investigation was undertaken by Mr. Robert Newstead, of the University of Liverpool, into the Life History of the Common House Fly. In view of the obvious mischief occasioned, the investigation was specially directed to the nuisance arising from stables, &c.

Cards containing the following information have been circulated throughout the City :—

Common house flies are well known to be carriers of disease germs. The presence of large numbers of flies clearly indicates filth in the vicinity.

Their chief breeding places are accumulations of manure, but decaying vegetable or animal material and filth of any kind also afford them breeding places. Their food, however, is not limited to filth, and it is this circumstance which renders them dangerous, for after feeding on garbage of the most offensive description, they will convey that filth to foodstuffs used by human beings, and so contaminate that food.

The mischief done by flies is not confined merely to the conveyance of filth ; they also carry disease germs from persons suffering from infectious disease to healthy persons. Flies are specially attracted to patients suffering from infectious sickness.

To avoid Danger:—

All house refuse should be burned, or placed in proper receptacles and kept covered. These receptacles should be frequently and completely emptied.

Food of all descriptions should be carefully screened with muslin or with wire covers.

Food offered for sale should be properly screened. Therefore, in buying food give preference to shops where the food is properly protected against flies.

Keep all rooms, especially the kitchen, free from dirt.

Keep flies away from the sick, and kill every fly in the sick room. His body is covered with disease germs.

Sinks and gullies should be well flushed with water, and the drainage system kept in good order.

Any unhealthy condition in the neighbourhood should be at once reported to the Medical Officer of Health, at the Municipal Offices, Dale Street, Liverpool.

INSPECTION OF STABLES AND REMOVAL OF MANURE.

The usual attention has been given and the necessity for the frequent removal of manure emphasied.

The applications to the City Engineer's Department for the removal of manure have been more frequent, and the owners of stables have been informed of the facilities now offered by the Health Committee for its speedy removal.

The disinfection of middensteads has proceeded systematically, as in the previous year, and during the year 8,190 middensteads, after being emptied, have been disinfected by spraying with lime.

	1908.	1909.
Number of Visits to stables by District Sanitary Inspectors...	18,749	18,379
Number of midden-steads disinfected	3,137	8,190

RAILWAY CARRIAGES.

	1908.	1909.
Number of Carriages Inspected	1,690	1,283
,, found dirty	—	7

Those found dirty were subsequently cleansed.

OFFICES.

	1909.
Number of Visits *re* Sanitary Conveniences	105

FEMALE SANITARY STAFF.

NOTIFICATION OF BIRTHS ACT, 1908.

During the year 23,591 births were registered, and of these 19,739 were notified under the Notification of Births Act within thirty-six hours of their occurrence. Of this number 17,623 were visited by the Female Inspectors. The visits are, whenever possible, paid before the infant is six weeks old.

A surprisingly small number are found dirty at the first visit—though numbers are unwashed if visited in the morning—for out of the number seen only 237 were found quite neglected and filthy; but it would seem that the mothers in many cases keep them clean awaiting the inspection and subsequent visits show that when that visit is over their care relaxes and a more careless state of things prevails. In all cases the needs for care, cleanliness, proper feeding, clothing, &c., are carefully explained. With regard to the feeding of the infants, it is interesting to note that the great majority are breast fed, and in the cases where artificial feeding has to be resorted to, the boat-shaped bottle is usually made use of, indeed, where their babies are fed from long-tube bottles, the mothers sometimes seem ashamed to admit it. When artificial food has to be given the Inspectors advise the use of the milk specially prepared at the Corporation Milk Depôts for infants; the average age of children put on Humanised Milk is three months.

In 682 cases it was found that the babies had died very shortly after birth, and in many more the families, being of the migratory class, had left the address given before the first visit was paid. On one district alone, that between Great Homer Street and Netherfield Road, 273 children could not be traced owing to removals, and in the Corporation Dwellings, out of 424 births notified only 262 of the families were found at the addresses given when visited, the remainder having removed elsewhere.

The large number of removals from the Corporation Dwellings during the year was exceptional, and was partly due to the outbursts of religious animosities of different sects, threats or attacks on person and property necessitating removal to other districts for safety. The injury resulting from the enforced removal of households in which a birth has recently taken place is one indication that religious strife is not without its evil influence upon the public health.

The number of mothers going to work is very small (455), and but few of this small number are entirely cut off from their babies during the day. Most of them can either go home occasionally, or, as in the case of hawkers, make their work subservient to the needs of their children.

Great and unnecessary discomfort is caused in many of the households by the slothful habits of the mothers, who often remain in bed after the elder children have gone to school, leaving the baby unwashed and unfed until the afternoon.

A considerable amount of information is summarised in the following table:—

STATISTICS RELATING TO VISITS PAID IN CONNECTION WITH NOTIFICATION OF BIRTHS ACT.

Total number of Births Notified	19,739
,, ,, Visited	17,623
Number of children seen at addresses given	14,343
,, ,, dead	682
,, ,, could not be traced owing to removals ...	2,598
,, ,, illegitimate	282
,, ,, found to be clean	12,864
,, ,, ,, dirty	237
,, ,, ,, unwashed	1,242
,, mothers healthy	12,386
,, ,, delicate	1,957
,, ,, working	455
,, infants breast fed...	12,583
,, ,, partly breast fed	900
,, ,, artificially fed	860
,, ,, fed on Cow's milk	606
,, ,, ,, Tinned milk	306
,, ,, ,, other Foods	848
,, instances in which Boat-shaped bottle is used... ...	844
,, ,, ,, Long-tube ,, ...	317
,, families in which all children born are living... ...	5,548
,, ,, ,, half or over are living	5,907
,, ,, ,, under half are living...	695
,, ,, ,, child is first-born	2,193

Number of families living in	Court houses ...	...	...	793
,, ,, ,,	Cellar dwellings	...	...	200
,, ,, ,,	Corporation dwellings	...	...	262
,, families in which	parents are Sober and careful	..		7,774
,, ,, ,, ,,	Drunken	...	...	698
,, ,, ,, ,,	Doubtful	...	...	5,871

During the year a very large share, indeed the greater part, of the time of the Female Inspectors has been taken up with sanitary work associated directly or indirectly with school children.

There are four medical inspectors of school children, and at each visit of a medical inspector the Female Sanitary Inspector of the district is present to render certain assistance to the doctor. Her knowledge of the district, and frequently also of the children, is found to be very valuable, whilst the information gained during the inspection enables her to ascertain the homes where her visits are most urgently needed.

The medical inspection is so arranged throughout the City as to divide the school work as equally as possible amongst the female staff, but four members are always in attendance, morning or afternoon, or both. The female staff also attend the re-inspections; they have, between them, attended 958 primary medical inspections and 648 re-inspections of school children who were considered to need re-inspection either by the medical inspector, school teacher, school nurse, or others.

Notices served upon parents with regard to the want of cleanliness of the children have too frequently been disregarded. Altogether 633 of these notices have been served, and in 379 of these cases the parents have cleansed their children without further steps being necessary; but no less than 233 children have been removed to the Disinfector, under the Children Act, their clothes being stoved, hair cut, and bodies, clothing, bedding and houses cleansed as required. The total number cleansed in this way during the year was 400, 367 going voluntarily, and without the service of the Statutory notices, for not infrequently the children thoroughly enjoy their visit to the Disinfector, and appreciate not only the food given them, but the luxury of temporary freedom from vermin, and the parents appreciate the new or clean clothes provided. In far too many instances children are repeatedly found verminous, and

this may be attributed to gross carelessness and indifference on the part of the parents. A number of cases in which children have been found verminous on more than one occasion have been prepared for prosecution, but the process is so very complicated, protracted and tedious that no case was taken into Court during 1909. Doubtless means will be discovered to facilitate the working of the Act. As a rule, the parents are very amenable to the Inspectors' advice as to short hair, cleansing, &c. The Inspectors constantly find that the lazy indifferent mothers (already referred to in connection with births) carry their slothful habits to such lengths that they do not provide wholesome and suitable food for their children. In many cases they rarely light a fire, and in one case the mother admitted not having lighted a fire for six weeks, the family, during that time, living on "cook shop" food, to the detriment of both the family health and pocket; this extravagant and injurious habit seems to be on the increase.

In addition to the work connected with the Medical Inspection, a very large number of cases have been referred by school teachers and others to the Public Health Department for visitation by the Female Staff; these consist of the usual minor ailments such as ring-worm, various forms of skin diseases, sore heads, sore eyes, and other accompaniments of neglect and ill-treatment; it has been found necessary to send numbers of children to Doctors, Hospitals and Dispensaries, or other Institutions for treatment.

The Female Inspectors comment very strongly upon the great evil arising from the dirty and neglected condition of children between baby-hood and school age, and of children who have left school. At the earlier ages especially they seem to fall into a condition of deplorable neglect; the school children have to be washed, or trouble will arise at school; the baby, and there is usually one, is to a certain extent under supervision, but the ex-babies are no one's care, and their condition is often deplorable in the extreme. The Children Act does not apply to them, and the Inspectors—like all others familiar with the facts—feel that some steps should be taken to compel parents to deal more fairly with these younger children.

The home visit obviously benefits that unfortunate class of child for which so little consideration is shown, namely, the child not yet of school age. It is sufficiently plain that the little brothers and sisters at home need attention even more than the child at school, who is under the daily observation of the teacher.

The Health Committee and the City Council approved of an application being made to Parliament in the Liverpool Corporation (General Powers) Bill of 1908, for powers to deal with verminous and neglected children, as well as school children, coming within that category. The Parliamentary Committee, however, declined to give the powers.

It was pointed out that the child at home may be and is a source of communicating infection to the child that goes to school.

The Chairman of the Committee at the time observed that "there is no precedent for such a proposal to give powers to go into people's homes to deal with children at a time when the State had taken no responsibility for the child. Directly the child became of school age and went to school the State took a certain responsibility with regard to the child, and the child was placed in a somewhat different position wth regard to the State." It was pointed out to the Committee that both classes of children are equally children of the State, and equally deserving of protection.

Excessive drinking is responsible for at least two-thirds of the work done by the Inspectors in connection with neglect of the home and of the children. The evil consequences are specially marked amongst women drinkers, and even in comparatively respectable neighbourhoods the vice goes on behind closed doors with supplies brought from the nearest public-houses, reducing decent people to the sordid poverty of the slums.

Among the agencies doing very good and successful work in the amelioration of the conditions of child life are the Committees of the "Summer Camp," Wallasey, the Blundellsands Cottage Homes, and the West Kirby Convalescent Home, all of which have again been exceptional in their kindness and helpfulness in receiving, on the recommendation of Inspectors, children either in need of wholesome food and a holiday, or help to recover after illness or neglect. The children invariably return in a robust condition, and speak highly of the many kindnesses they have received. At the Fazakerley Hospital a number have been treated during the year, and have greatly benefited by their sojourn. The improved health of the child has in many instances led to a revival of affection on the parent's part, and past neglects have not been repeated. Very valuable assistance has been rendered by the Invalid Children's Aid Society, the cases reported to Miss Beavan at once finding relief Miss Whishaw, of Arnside, has rendered, as in previous years, most valuable help in finding homes for forsaken and unwanted babies, and in placing young girls in suitable homes.

The Midwives, who have exceptional opportunities of learning the intimate domestic conditon of persons whom they attend, have been instrumental in bringing to the notice of the Inspectors many cases of extreme poverty, neglect, ignorance, and drink, thereby enabling assistance or advice to be given, or such other action to be taken as the case required.

Milk has been supplied to poor nursing mothers requiring nourishment on the recommendation of the Inspectors, or where artificial feeding is resorted to, humanised milk is supplied for the baby.

Old persons, too feeble or unfit to take care of themselves, or suffering from some chronic complaint, have been persuaded to go into hospital, and it frequently occurs that the Inspector is successful where relatives and others have failed. The Old Age Pensions have greatly benefited many old people, making them independent of their relations, who have on that account become more interested in their welfare.

With a view to making special enquiries for the Home Secretary regarding Infantile mortality, 130 homes were visited, and in 60 cases it was found that the mothers went out regularly to work. The districts in which employment is more largely available for women are Old Swan and Garston. Forty cases were visited in the former district, and 54 in the latter, the number of mothers industrially employed being 16 and 21 respectively. In 36 cases visited in the central parts of the city 23 mothers were employed, either in bag warehouses, sorting cotton and rags, or as hawkers. The number of working mothers in any of the neighbourhoods is very small, and in many cases, particularly amongst the hawkers, mothers have ample opportunity for attending to the needs of their babies. The income of the parents living in the centre of the city is rather more than that of those living in Old Swan and Garston. In many cases the homes of the working mothers are more comfortable, and the children better fed and cared for than those of the unemployed. This may be partly due to the larger income, though it may be equally due to the fact that the mothers who work are more capable and energetic. Amongst the 60 workers only eight children were put out to nurse, and they were brought home by their mothers at night. Three nursing mothers were supplied with milk, free of charge.

Re EMPLOYMENT OF "WORKING MOTHERS."

Table "A."

District.	No. of Mothers Visited.	No. Industrially Employed.	Average Weekly Income of Family.	Mother Earns.	Father Earns when		Child Illegitimate, Mother Earns.	Character of Father's Employment.			Cause of Mothers Working.					
					Mother Works.	Mother not Working.		Regular.	Casual.	Nil.	Husband's Small Wages.	Husband's Ill-health.	Husband Drinks.	Husband Lazy.	Husband out of Work.	From Choice.
			£ s. d.	s. d.	s. d.	£ s. d.	s. d.									
Old Swan ...	40	16	1 1 2	8 0	16 11	1 1 4	—	20	18	2	6	—	5	2	—	3
Garston	*54	21	1 1 7	9 1	15 10	1 0 3	10 4½	14	35	1	10	2	6	1	1	1
City	36	23	1 2 10	9 4	14 1	1 3 5	6 8	16	20	—	7	—	15	—	—	1

* Four of the mothers were unmarried.

Re EMPLOYMENT OF "WORKING MOTHERS."

Table "B."

Nature of Employment.	Mother Works.		
	Before Birth.	After Birth.	Before and After Birth.
Rope Walks	7	2	3
Bobbin Works	4	—	11
Bag Warehouse	—	1	5
Cotton Warehouse	1	—	2
Hawker	2	—	6
Charwoman	1	—	4
Laundry	2	—	3
Marine Store	—	—	2
Domestic	—	—	1
Dressmaker (at Home)	—	—	1
Washing	—	—	2

Statistics relating to the work performed by the Female Sanitary Staff during the year will be found appended.

STATISTICS OF WORK DONE BY FEMALE SANITARY STAFF.

	1908.	1909.
Number of Visits relative to Births notified	20,215	17,623
,, Revisits ,, ,, ,, ,, ...	2,869	3,043
,, Visit to School Cases	13,742	22,934
,, Revisits ,, ,, ...	2,138	5,240
,, Visits to underfed sick children	546	—
,, ,, to Schools	204	1,606
,, Children inspected in Schools	—	3,836
,, References to Education Committee ...	8,547	10,246
,, ,, ,, District Sanitary Inspectors	812	752
,, ,, ,, Lodging-house Inspectors	57	59
,, ,, ,, Central Relief Society ...	35	2
,, ,, ,, City Engineer	26	77
,, ,, ,, Water Engineer	30	31
,, ,, ,, The Shelter, Islington ..	153	142
,, ,, ,, Relieving Officer	6	1
,, Sterilised Milk Depôt Visits	75	117
,, Street Houses visited	4,595	4,319
,, Court ,, ,, ...	630	882
,, Cellars	1,107	1,093
,, Families found dirty	525	448
,, Re-visits to Families	1,497	1,327
,, Houses found dirty	1,858	1,843
,, Cellars ,, ,, ...	284	347
,, Notices issued to cleanse dirty premises	3	3
,, ,, ,, floors and woodwork	13	55
,, ,, to Parents of verminous Children	—	635
,, Verminous Children cleansed by Parents	—	359
,, ,, ,, ,, Staff ...	—	400
,, Special Visits	5,554	5,635
,, Police Aided Association Visits	151	88
,, Visits *re* Diarrœa Cases	255	97
,, ,, ,, ,, (fatal)	587	473
,, Enquiries *re* Fire Guards	147	2
,, Visits on behalf of Lord Mayor's "Unemployed" Fund	* 1,200	842

* In addition to this number 582 visits were made by District Male Staff.

FACTORY AND WORKSHOP ACT, 1901.

BAKEHOUSES.

The sanitary control of Bakehouses is dealt with under the Factory and Workshop Act and Public Health Acts; the regulations prescribed were set out in the Annual Report for 1904.

By Section 133 of the Workshop Act, 1901, if any child, young person, or woman is employed in a bakehouse, the Medical Officer shall, on becoming aware thereof, give a written notice to His Majesty's Inspector of Factories.

Where any room or place used as a bakehouse is in such a state as to be, on sanitary grounds, unfit for use as a bakehouse, the occupier is liable on summary conviction to a fine not exceeding forty shillings.

Fifteen bakehouses were added to the Register during 1909, 2 are new ground-floor bakehouses for bread-bakers and confectioners; the remaining 13 are confectioners only.

During the year four plans were submitted and approved of for ground-floor bakehouses.

Number of Bakehouses on Register, 31st December, 1909... ...	870
,, Bakehouses added to Register during 1909	15
,, Bakehouses struck off Register during 1909	20
,, Visits paid to bakehouses	4,664
,, Bakehouses found dirty (walls and ceilings)	437
,, Notices issued for lime-washing	87
,, Bakehouses lime-washed without notice	350
Number of Notices issued to repair drains and waste pipes ...	2
,, ,, ,, to repair defective floors, walls, ceilings, roofs and pavement lights ... ,,	12

Number of Notices issued			to cleanse floors, windows, areas, tables and troughs	3
,,	,,	,,	for deficient ventilation	4
,,	,,	,,	to remove drains from within bakehouses	2
,,	,,	,,	to provide separate water-closet accommodation for the sexes	3
,,	,,	,,	to cease to use as bakehouses places underground not in conformity with Act, 1901	3
,,	,,	,,	to remove refuse from within bakehouse	1
Number of References to Government Factory Inspector... ...				17

All the above notices were complied with by the owners or occupiers.

UNDERGROUND BAKEHOUSES.

Underground bakehouses are dealt with by special provisions of the Factory and Workshop Act, 1901, which came into force on 1st January, 1904.

By an underground bakehouse is meant a bakehouse, any baking room of which is so situate that the surface of the floor is more than three feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room. The expression "baking room" means any room used for baking, or for any process incidental thereto.

Details of the requirements of these premises will be found in the Annual Report for 1905.

The number of underground bakehouses on the register at the end of the year was 187. Of this number 175 are in use, eight are unoccupied, and four have been structurally altered and occupied for other purposes. Since the passing of the Act in 1901, two hundred and thirty-nine underground bakehouses have ceased to be used for baking purposes.

One certificate of suitability was issued for an underground factory bakehouse during the year.

Administration of the Factory and Workshop Act, 1901, in connection with FACTORIES, WORKSHOPS, WORKPLACES & HOMEWORK.

The following Tables are prepared by request of the Secretary of State:—

1.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries.)	253	128	1
Workshops ... ... (Including Workshop Laundries.)	16,106	1,478	16
Workplaces ... ... (Other than outworkers' premises included in Part 3 of this Report.)	1,007	139	1
Total	17,366	1,745	18

2.—Defects Found in Factories, Workshops and Workplaces.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts:—**				
Want of cleanliness	480	473	—	2
Want of ventilation	31	31	—	—
Overcrowding	1	1	—	—
Want of drainage of floors	8	7	—	—
Other nuisances	825	802	—	7
†Sanitary accommodation — insufficient	53	52	—	6
†Sanitary accommodation — unsuitable or defective	675	656	—	3
†Sanitary accommodation — not separate for sexes..	62	56	—	—
Offences under the Factory and Workshop Act:—				
Illegal occupation of underground bakehouse (S. 101)	2	2	—	—
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	89	89	—	—
Other offences ... ... (Excluding offences relating to outwork which are included in Part 3 of this Report).	—	—	—	—
Total	2,226	2,169	—	18

* Including those specified in Sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Act Amendment Acts, 1890, has been adopted by the City Council. The standard of sufficiency and suitability of sanitary accommodation for persons employed in Factories and Workshops is in accordance with the Sanitary Accommodation Order of 4th February, 1903.

3—Home Work.

*NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.												OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Numbers of Addresses of Outworkers received from other Councils.	Numbers of Addresses of Outworkers forwarded to other Councils.	Prosecutions.			Number of Inspections of Outworkers' premises.						
	Twice in the year.			Once in the year.														
	a Lists.	*a* Outworkers.		Lists.	*a* Outworkers.				Notices served on Occupiers as to keeping or sending Lists.	Failing to keep or permit inspection of Lists.	Failing to send Lists.		Instances.	Notices served.	Prosecutions.	Instances.	Orders made (S 110).	Prosecutions (Sections 109, 110).
		Contractors.	Workmen.		Contractors.	Workmen.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Wearing Apparel—																		
(1) Making, &c.	580	1,948	1,096	19	38	17	84	108	40	—	—	1,109	—	—	—	2	2	—
(2) Cleaning and Washing	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sacks	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and Upholstery	—	5	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—
Fur Pulling	—	—	3	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—
Umbrellas, &c.	—	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paper Bags	2	3	6	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—
Boxmaking	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Basket Making	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electro-Plate	—	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Making of nets	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Feather Sorting	2	3	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
Stuffed Toys	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Processes incidental to above	—	9	4	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—
Total	584	2,014	1,113	19	38	17	86	108	40	—	—	1,126	—	—	—	2	2	—

* Several Employers give out work of more than one of the classes specified in column 1. The lists are included among those in column 2 against the principal class *only*, but the outworkers are assigned in columns 3 and 4 into their respective classes.

a The figures in columns 2, 3 and 4 are the *total* number of lists (received from employers who sent them both in February and August as required by the Act) and of the entries of names of outworkers in those lists. They are, therefore, double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name is often repeated.

4—Registered Workshops.

Workshops on the Register (S. 131) at the end of the year.	Number.
Workshops	3,684
Cooking Kitchens of Restaurants	369
Bakehouses	870
Total number on Register	4,923

5.—Other Matters.

Class.		Number.
Matters notified to H.M. Inspector of Factories:— Failure to affix Abstract of the Factory and Workshop Act (S. 133)		26
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5)	Notified by H.M. Inspector ...	285
	Reports (of action taken) sent to H.M. Inspector	285
Other		104
Underground Bakehouses (S. 101)		
Certificates granted during the year		1
In use at the end of year		172

FACTORY AND WORKSHOP ACT, 1901.

The Inspectors appointed under the above Act for sanitary purposes have visited a large number of Workshops and Workplaces, the summary of which is appended :—

SUMMARY OF VISITS PAID TO WORKSHOPS AND WORKPLACES.

	1908.	1909.
Bakehouses	4,868	4,664
Bamboo Workers	7	4
Basket Makers	28	30
Blindmakers	9	8
Block Makers	9	2
Boot Makers	923	886
Bottlers	27	28
Bottle Washers	—	17
Box Makers	22	16
Brush Makers	40	29
Cabinet Makers and Joiners	1,007	1,054
Canned Goods	110	124
Cap Makers	15	25
Carvers and Gilders	108	97
Chair Makers	32	49
Chemists' Sundries Manufacturers	24	31
Coach Builders	106	80
Confectioners	74	83
Coopers	115	113
Cork Cutters	42	38
Cotton Sorters	152	161
Cycle and Bassinette Makers	106	98
Dentists	12	21
Dressmakers	1,247	1,178
Drysalters	58	40
Electricians	8	11
Engravers	71	100
Firewood Manufacturers	35	27
Fish Curers	25	51
Flag Makers	12	13
French Polishers	127	145
Furriers	18	25
Galvanisers	13	28
Glass Blowers	3	7
Ham Curers	1	—
Image Makers	9	6
Knitters	30	14
Laundries	1,054	1,061
Marble Masons	19	24
Marine Stores	631	707
Mattress and Bed Makers	41	47
Metal Polish Makers	10	9
Milliners	269	277
Mineral Water Manufacturers	7	7
Musical Instrument Makers	13	21
Opticians	3	14
Paint and Varnish Manufacturers	21	17
Paper Cutters, &c.	16	8
Photographers	72	65
Pickle and Sauce Manufacturers	46	54
Picture Framers	63	59
Pipe Mounters	9	4
Plumbers	108	123
Preserve Makers	—	1
Relief Stampers	1	2
Restaurants	922	1,007
Rubber Goods Manufacturers	16	15
Sack and Bag Makers	101	109
Saddlers	97	91
Sailmakers	22	31
Sausage Makers	5	—
Sign Writers	30	25
Smiths	601	693
Tailors	2,255	2,264
Tarpaulin Makers	62	34
Trunk and Portmanteau Makers	45	73
Umbrella Makers	30	34
Underclothing Makers	263	305
Upholsterers	191	155
Watchmakers and Jewellers	164	209
Wheelwrights	80	115
Wig Makers	13	22
Wire Workers	16	33
Various	213	95
Total	17,002	17,113

FACTORY AND WORKSHOP ACT, 1901.

FACTORIES.

Factories include all places in which mechanical power is used in aid of the manufacturing processes.

The 253 inspections of Factories referred to in the foregoing tables represent 129 Factories, which were inspected by the District Sanitary Inspectors principally as a result of complaints being received. The duty devolving upon the Health Department in connection with Factories is the enforcement of the provision of suitable and sufficient sanitary conveniences.

WORKSHOPS.

Workshops include any premises (not being Factories) in which manual labour is exercised by way of trade, or for purposes of gain in, or incidental to, the making, altering, repairing, finishing or adapting for sale of any article, and to or over which the employer of the persons working there has the right of access or control.

The Workshop Inspectors made 11,442 inspections of Workshops, and in 2,945 occasions the premises were found to be incorrect. The number of inspections in 1908 was 11,212. This does not include bakehouse workshops visited by the Bakehouse Inspector.

There are a few underground workshops, but all of them comply with the essential requirements in respect to light and ventilation, and are, in the main, situated in the centre of the City. None of them are occupied by a great number of workers.

A large number of new workshops has been added to the Register. One hundred and twenty-eight workrooms have been measured during the year, as compared with 53 in 1908.

WORKPLACES.

Workplaces include any place where work is done permanently, and where people assemble together to do work permanently of some kind or other. The kitchens of restaurants, &c., though they are not workshops, come within the meaning of the term "workplace."

1,007 visits were paid during the year to the kitchens of restaurants by the Workshop Inspectors; on 64 occasions the premises were incorrect. The number of visits in 1908 was 922. Attention is being particularly paid to the nuisance arising from the removal of swill, and the Inspectors make a practice of visiting the premises early in the day when the swill is generally removed.

The nuisances found were in most instances remedied on notices being served, but in several cases it was necessary to take further proceedings, with the result that fines amounting to £3 1s. 0d. were inflicted. The fines in the previous year amounted to £6 3s. 0d.

Several defects were found which could not be dealt with by this Department, and they were referred to the City Engineer, Water Engineer and the Building Surveyor.

HOME WORK.

In accordance with Section 107 of the Factory and Workshop Act, 603 lists of outworkers were received (302 in February and 301 in August) giving the names and addresses of 3,182 employees. The number of lists received in 1908 was 597, containing the names of 3,389 employees.

On examination of the lists they were found to contain 1,938 Workshops or Domestic Workshops already on the Register (946 in February and 992 in August). The other addresses, excepting those situated outside the City, were visited by the District Sanitary Staff, and in several instances the premises were found to be new workshops or Domestic Workshops, *i.e.*, where the work done constituted the sole or principal means of living of the family. These were placed on the Workshop Register, to be visited periodically by the Workshop Inspectors. The home work in 1,130 cases was found to be an additional source of income only.

LAUNDRIES.

In the course of an Inquiry into the circumstances of the Chinese resident in the City, it was reported that Chinese laundries have been established in Liverpool for a great number of years, and appear to be carried on with success. There are 45 of these laundries registered as workshops, which are periodically inspected by the Workshop Inspectors under the Factory and Workshop Act. They compare quite favourably with the ordinary English laundries (of which there are 244) and are on the whole conducted in a more orderly fashion.

FURNITURE REMOVERS' VANS.

	1908.	1909.
Number of Visits	219	201
,, Vans examined	177	101
,, found correct	153	100

In each case where the vans or wraps were found dirty, a notice was served on the owner to cleanse them.

SHOP HOURS ACTS, 1892—5.

The object of these Acts is to prevent the employment of young persons for such an excessive number of hours as will prejudice the health of these employees.

During 1909, under the above Acts there have been 6,532 visits and re-visits paid to shops during the day, and 5,964 re-visits made after six o'clock in the evening; in 139 instances the hours were found to be incorrect, and in 466 instances a copy of the Act was not exhibited, as required by the Act of 1892.

The persons concerned have generally evinced readiness to comply with the requirements of the Acts, and have thus lessened the difficulties in its administration. The number of occasions in which it was necessary to take proceedings during the last two years is small.

	1908.	1909.
Number of day visits to Shops	6,363	6,313
,, Shops found without copy of Act exhibited	634	466
,, copies of Act supplied	490	421
,, re-visits to Shops during day ...	162	219
,, Shops found incorrect	48	51
,, re-visits to Shops after 6 p.m... ...	4,402	5,964
,, Shops found incorrect	283	139
,, Informations for excessive hours ...	—	—
,, Convictions	—	—
,, Informations for not exhibiting Notice of Acts and Requirements as to hours of work	8	3
,, Convictions	5	2
Total number of Informations	8	3
,, ,, Convictions	5	2
Total Amount of Fines and Costs	£6 7 0	£0 19 0

SEATS FOR SHOP ASSISTANTS ACT, 1899.

The object of the Act is to provide seats for female assistants.

	1908.	1909.
Visits for the purposes of the Act	643	620
Found correct	592	582
Number of Informations	—	—
,, Convictions	—	—
Total Amount of Fines and Costs	£0 0 0	£0 0 0

Seats in each case were subsequently provided.

EMPLOYMENT OF CHILDREN ACT, 1903.

This Act is intended for the limitation and regulation of child labour, and affects children of school age, viz., 14 years of age and under. The Act prohibits a child being employed between the hours of 9 p.m. and 6 a.m., although these hours have been varied by means of bye-laws which have been prepared by the Council and have been sanctioned by the Home Secretary. These bye-laws were printed in detail in the Medical Officer's Annual Report for 1908.

The Act contains clauses prohibiting children carrying burdens likely to cause them injury, and from being employed in any occupation likely to be injurious to their lives, limbs, health or education.

Another clause prohibits children who are working half-time under the Factory and Workshop Act from being employed in any other occupation.

There are other clauses relating to children engaged in street trading. These have been dealt with by the Watch Committee, and are enforced by the Police.

	1908.	1909.
Number of Day Visits for the purposes of the Act...	1,095	1,086
,, Contraventions found	61	483
,, Re-visits during day	—	1,355
,, found incorrect	—	21
,, Re-visits at night	—	1,589
,, found incorrect	—	132
,, of Informations	17	41
,, of Convictions	13	41
Amount of Fines and Costs ...	£23 13 0	£38 4 0

The following table shows the periods of the day at which these visits were made:—

	No. of Visits.	No. of Contraventions Found.
Before 7 a.m. or after 8-15 a.m.	34	3
,, 12-30 p.m. or after 1-15 p.m.	6	—
,, 5 p.m. or 5-30 p.m. (to barbers' shops) ...	92	—
After 8 p.m. or 8-30 p.m. (to barbers' shops) ...	952	100
Thursdays (to barbers' shops)	91	6
Saturdays before 10 a.m. (to barbers' shops) ...	8	3
Saturday re Maximum Hours (each shop is usually visited 4 times)	1,307	—
Saturday after 9 p.m.	219	26
Sunday after 9 a.m.	235	15

PROTECTION OF CHILDREN FROM FIRE.

The distribution of fireguards has been continued during the year, and when the money which had been kindly provided by philanthropic persons was exhausted, a total of 1,147 fireguards had been distributed amongst poor people with large families, who on investigation appeared quite unable to provide one for themselves.

An intimation was received from all the Hospitals in the City of cases of burning and scalding of young children which had been admitted and a visit was paid by members of the female staff to each house where an accident had occurred. The provisions of Sec. 15 of the Children Act were explained to persons who appeared to neglect to take proper precautions for the safety of their children, and in the cases where a fatal accident occurred the parents were dealt with by the Police in accordance with the terms of the Act.

MIDWIVES ACT, 1902.

As in previous years, the work of the midwives has been under constant supervision. Visits were paid to the midwives' homes to inspect case books and appliances, and to the patients' homes to investigate the manner in which the work is carried on. One thousand two hundred and fifty-seven such visits were paid, chiefly for the purpose of assisting and instructing the untrained midwives, and it is gratifying to report that the time spent on these women is repaid in the progressive improvement that has taken place in their practice. Midwives are encouraged to report, for further investigation by the sanitary staff, any condition in connection with a house which may have an influence upon the health of the mother or child.

One unregistered woman was fined 40s. and costs for illegally practising midwifery, when not registered under the Midwives Act.

Every opportunity is taken to bring the rules of the Central Midwives Board under the notice of the midwives, and to emphasise the importance of adhering to the provisions laid down in them.

At the close of 1909 there were, so far as could be ascertained, 334 women in Liverpool qualified under the Midwives Act to attend confinements.

The following table gives the qualifications of these women, and also a comparison with the four previous years:—

	1905.	1906.	1907.	1908.	1909.
Central Midwives Board Examination ...	—	30	52	80	108
Ladies' Charity and Lying-in Hospital ...	153	120	110	106	105
London Obstetrical Society	124	74	73	69	64
Rotunda Hospital, Dublin	8	7	7	6	6
Glasgow Maternity Hospital	5	4	3	3	2
Queen Charlotte's Lying-in Hospital ...	4	4	2	2	1
Manchester Maternity Hospital	3	2	3	2	2
National Maternity Hospital, Dublin ...	3	3	3	2	1
Coombe Lying-in Hospital, Dublin ...	2	3	3	4	2
St. Mary's Hospital, Manchester	1	1	1	1	1
Dundee Maternity Hospital	1	1	1	1	1
Royal Maternity Hospital, Edinburgh ...	1	1	5	—	—
In Bona-fide Practice prior to 31st July, 1901	56	45	45	41	41
Totals	361	295	308	317	334

It is satisfactory to note that the number of efficiently trained midwives is steadily increasing, only 12 per cent. being now untrained.

Of the 334 midwives residing in Liverpool, 179 are in private practice as midwives, 52 are employed in Public Institutions as midwives or maternity nurses, and 113 are employed as private maternity nurses under the supervision of a medical practitioner or in some other employment.

WORK DONE BY MIDWIVES.

A total of 16,996 births were attended by women out of a total of 23,591 births which occurred in the City during the year 1909. Included in this number are 2,857 births attended by midwives on the Staff of the Ladies' Charity and 878 births attended by unregistered women.

The extent of the practice of individual midwives varies very considerably, one midwife having attended over 500 cases, while 70 attended less than 50 cases. The average was 86 cases to each midwife in practice.

STATEMENT OF NOTIFICATIONS OF BIRTHS RECEIVED DURING THE YEARS :—

Notifications Received from	1908. Births.	1908. Per centage of Births Registered in the City.	1909. Births	1909. Per centage of Births Registered in the City.
Certified Midwives	13,083	54·79	13,184	55·89
Medical Attendants.....	2,985	12·50	2,300	9·75
Poor Law Institutions	787	3·29	840	3·56
Ladies' Charity Maternity Hospital...	426	1·78	448	1·90
Ladies' Charity District Homes	1,745	7·30	1,902	8·07
Uncertified Women.....	685	2·86	788	3·34
Parents	324	1·35	277	1·17
	20,035	83·87	19,739	83·68

Total Number of Births registered in the City	1908	—	23,891
	1909	—	23,591

STILL BIRTHS.

The number of still births notified by midwives was 469, which is at the rate of 2·9 per cent. of the births attended. The prevalence of still births in the practice of midwives varies very much, the highest rate being 12 per cent., the lowest being 0·99 per cent., in the practice of midwives attending over 20 confinements per year. In no case does a midwife give a certificate of still birth unless she is present at the time of the birth; she is instructed that if the birth should take place before her arrival she must report the matter to the Coroner, who, upon inquiry, grants a certificate for the burial of the body. The Medical Officer of Health has arranged for still births to be received at the Mortuary, Ford Street, where, if the parent is unable to pay the fee the body is taken charge of and arrangements made for its burial.

The following figures give the months of pregnancy during which the still births took place, viz.:—

	1909.
Sixth month	37
Seventh month	65
Eighth month	75
Ninth month	257
Not specified	35
Total	469

In 6 cases the child was illegitimate.

MEDICAL ASSISTANCE.

Under the Rules issued by the Central Midwives Board, a midwife must advise that medical assistance shall be called in where there is any abnormal circumstance connected with the confinement.

The following Table gives the details of the complications for which medical assistance was required during the past year:—

Abnormal Presentation—	1909.
Brow or Face Presentation	23
Occipito-posterior Presentation	25
Transverse Presentation	26
Breech Presentation	8
Foot Presentation	4
Cord Presentation	18
Placenta Prævia	13
Deformed Pelvis	59
Anti-partum Hæmorrhage	29
Post-partum Hæmorrhage	34
Retained Placenta or Membranes	66
Ruptured Perinæum	49
Multiple Births	3
Malformation of Child	15
Abortion or Premature Birth	32
Pyrexia	39
Eclampsia	16
Ophthalmia	3
Obstructed Labour, Uterine Inertia, or requiring Instrumental Assistance	320
Various or not definitely specified	82
Total	864

Since the Act came into operation, the Health Committee have, on the advice of the Medical Officer of Health, consented to pay a fee of one guinea for every case where emergency assistance had been rendered by a medical practitioner at the request of a midwife, and in which the fee could not be recovered either from the patient's friends or from the Boards of Guardians. Where part payment is made from

these sources, the Health Committee have made up the balance. This arrangement has given general satisfaction. The numbers of references to medical men vary slightly year by year. The total amount paid during each of the last four years has been:—

1909	...	...	...	...	...	...	£348	12 6
1908	...	...	...	...	...	...	357	2 6
1907	...	...	...	...	...	...	213	9 0
1906	...	...	...	...	...	...	240	6 0

It may perhaps be worth mentioning that the Medical Officer of Health conferred with the members of the Liverpool Medical Institution when the Act was passed upon the question of the fee, since it was obvious that some emergencies would involve much greater time and anxiety than others, but the uniform fee was thought the best, as it would be impossible to discriminate.

It must be remembered that this fee is for emergency assistance only, and it does not involve any subsequent attendance by the medical man. If he chooses to attend he has no additional claim upon the Health Committee.

It is also desirable that the circumstances in which midwives themselves, called to an emergency case, have to go without a fee, should receive due consideration, so that some recompense may be given to the midwife discharging that work.

It has happened that when the midwife has sent for emergency assistance, and part of the doctor's fee has been paid by the patient, there has not been enough money left to pay the midwife anything at all.

PUERPERAL FEVER.

The number of cases of Puerperal Fever notified to the Medical Officer of Health during the year was 62, of which 21 proved fatal. This gives a death rate of 0·9 per 1,000 births in the City, a slight increase on the figure for last year, but still below that of previous years.

Thirty-three cases were removed to Hospital, viz.:—3 to Brownlow Hill Infirmary, 8 to Mill Road Infirmary, and 22 to the City Hospital, Fazakerley.

After the usual investigations were made, 34 cases, of which 9 died, were found to have occurred in the practice of midwives. One midwife had 3 cases, 7 midwives had 2 cases each, and 17 midwives had 1 case each.

Two cases, of which one died, occurred in the practice of unregistered women.

Every precaution was taken to prevent the disease being conveyed to other women, and it is gratifying to remark that much greater care is now taken by midwives in cleansing themselves and their clothing and appliances than in previous years.

The keeping of temperature charts during the puerperal period has proved of immense benefit in helping to direct the attention of the midwife to the possibility of puerperal complications, and enables her to recognise the necessity of calling in medical assistance at the earliest indication of danger.

OPHTHALMIA NEONATORUM.

This is an extremely serious affection which attacks the eyes of newly-born infants. It is usually caused by the entrance of certain bacteria into the eyes at the time of birth. The symptoms, redness and swelling of the eyelids, make their appearance in about three or four days after birth, and the disease frequently runs such an acute course that if proper treatment is not applied immediately the eyes are permanently damaged and the child is rendered blind for life.

The extent to which this disease is prevalent in this country is shown by the statements made by well-known authorities that over one-third of the inmates of schools for the blind lost their sight as a result of this disease. On the other hand, it is no less certain that if this disease is brought under efficient treatment when the symptoms first make their appearance the eyes can be saved from serious injury and the sight preserved.

Under the Midwives' Act, midwives are compelled to inform the Local Supervising Authority (in Liverpool the Health Authority) of such cases, and to call in medical assistance. Much care has been taken to impress upon midwives the serious character of this disease, and they have been very quick to recognize it, so that now the majority of cases have prompt medical advice.

The gratifying result is that in 1909 only one case of blindness was due to the neglect of a Liverpool "midwife," and she was an unregistered woman who was carrying on an illegal practice. Proceedings were subsequently taken under Sec. 1 (Sub-Sec. 1) of the Midwives Act, 1902, and a fine of 40s. and costs inflicted.

A large amount of this good result has been due to the provision of a small ward of four beds at St. Paul's Hospital and the interest taken in the cases by Dr. A. Nimmo Walker. In this ward the infants of but a few days old can be received with their mothers in order that the necessary treatment may be carried out, and also that they may not be deprived of their natural nourishment. This last point is most important, as Dr. Walker reports that he is "more and more impressed with the difficulty of saving severely infected eyes in bottle-fed infants."

Number of cases of Ophthalmia Neonatorum reported to Medical Officer of Health:—

1908	60
1909	59

Further and very material help has been given by Miss E. L. Rathbone, who in December, 1909, generously offered to defray the expense of providing a specially trained Hospital Nurse to visit the homes of those cases where the parents are unable to provide adequate attention. The offer was gratefully accepted by the Health Committee, and arrangements were made whereby she was placed on the Staff of the Medical Officer of Health, and works in conjunction with either the private medical attendant or the Hospital Authorities, as the case may be. Undoubtedly this arrangement will be most useful.

INFECTIOUS DISEASE IN SCHOOLS.

The following tables show the age distribution and the monthly distribution of the school cases of infectious disease during the year:—

Table I.—SCHOOL CASES (Infectious Diseases).

AGE DISTRIBUTION—January-December, 1909.

DISEASE.	Under 5.	Under 6.	Under 7.	Total Under 7.	Under 8.	Under 9.	Under 10.	Under 11.	Under 12.	Under 13.	13 and over.	Total 7 years and upwards.	Grand Total.
Scarlet Fever	160	327	365	852	364	277	212	160	134	134	163	1444	2296
Diphtheria	28	82	91	201	95	61	46	32	21	31	41	327	528
Measles	873	1510	837	3220	313	144	73	45	32	18	27	652	3872
Whooping Cough	247	582	275	1104	82	36	18	4	11	3	6	160	1264
Chicken-pox	165	457	334	956	177	100	51	34	22	15	9	408	1364
Mumps	99	360	417	876	374	231	180	121	97	94	94	1191	2067
Totals	1572	3318	2319	7209	1405	849	580	396	317	295	340	4182	11391
Per cent. of those on Roll	18·6	22·3	14·8	18·5	9·2	5·8	3·9	2·9	2·3	2·2	2·8	4·3	8·4

Table II.—SCHOOL CASES (Infectious Diseases).

MONTHLY DISTRIBUTION—January-December, 1909.

DISEASE.	January.	February.	March.	April.	May.	June.	*July.	August.	September.	October.	November.	December.	Total.
Scarlet Fever	226	182	168	188	213	216	144	149	188	189	237	196	2296
Diphtheria	38	60	31	36	36	50	35	33	50	52	52	55	528
Measles	159	430	742	245	795	929	88	62	101	78	163	80	3872
Whooping Cough	183	102	103	162	74	53	4	75	49	102	197	160	1264
Chicken-pox	178	138	143	74	58	153	10	42	69	155	179	165	1364
Mumps	423	452	459	167	129	115	12	27	64	80	86	53	2067
Totals	1207	1364	1646	872	1305	1516	293	388	521	656	914	709	11391

* Holidays—July 2nd–August 9th.

The chief point of interest shown in these tables is the outbreak of Measles that occurred during the early part of the year.

As will be seen from the diagram opposite to page 36, which gives the weekly number of deaths from Measles during the last eight years, this outbreak was not of so severe a character as those which occurred in the previous years 1904 and 1906. The interval which elapsed since the last outbreak was much longer, lasting over 30 months, and during that time Measles continued to be prevalent, not as in previous intervals, when the disease almost entirely disappeared from the City.

Several schools were closed, and on March 12th all the Infants' Departments were closed until March 29th. As, however, the disease did not show signs of subsiding the period of closure was extended to the end of the Easter Holidays, that is, until April 19th.

On the whole, the teachers in the various Elementary Schools are prompt in notifying cases of infectious disease, though in some cases there is still room for improvement. Fear of losing attendances still weighs with some teachers and leads to children whose symptoms are suspicious being kept in school until the teachers are certain that the illness is infectious.

Obvious ill-health of the pupil is, however, always a proper reason for excluding him from school, whatever the cause of the illness may be.

The following is a list of schools closed during the year owing to the prevalence of Measles and other infectious diseases amongst the scholars:

Date of Notice.	Sehool.	Department or Departments.	Nature of Disease.	Period of Closure
1909.				
Jan. 29	St. Mary's, West Derby ...	Infant	Measles, &c.	Until 15th Feb.
Feb. 12	Sheil Road Council	,, ...	,,	Fourteen days.
15	Arundel Avenue H.G.	,, ...	Mumps, &c.	,, (See 4th Mar.)
20	Old Chureh, Moorfields	,, ...	Measles, &c.	Fourteen days.
20	St. Lawrence's, Croylands Street	,, ...	,,	,,

Date of Notice.	School.	Department or Departments.	Nature of Disease.	Period of Closure.
Feb. 20	Fairfield, Denman Street ...	,, ...	Measles, &c.	Fourteen days.
20	Wesleyan, Erskine Street ...	,, ...	,,	,,
22	Arundel Avenue H.G.	Mixed	Mumps, &c.	Until 1st Mar. (See 4th Mar.
23	Sheil Road Council	,, ...	Measles, &c.	Until 1st Mar.
25	St. Peter's, Sackville Street	Infant	,,	Fourteen days.
26	St. Silas's, Toxteth	,, ...	,,	Until 15th Mar.
26	St. Francis Xavier's, Haigh Street	,, ...	,,	,, 15th Mar.
Mar. 3	St. Alexander's, St. John's Road	,, ...	,,	Fourteen days.
3	Westminster Road Council	,, ...	,,	,,
4	Tiber Street Council	,, ...	Chickenpox and Mumps	,, ,,
4	Bankhall Institute	,, ...	Measles and Mumps	,,
4	Arundel Avenue H.G.	Whole School	Mumps, &c.	,,
5	St. Alphonsus', Kirkdale ...	Infant	Measles, Mumps, &c.	,,
5	Trinity District, Wavertree	,, ...	,,	,,
5	Butler Street Council	,, ...	,,	,,
6	"The Rathbone" Council	,, ...	Measles ...	,,
9	Parkhill Road, H.G.	,, ...	Measles, &c.	,,
9	St. Francis', Walton	,, ...	,,	Until 29th Mar.
9	St. George's, Everton	,, ...	,,	,, 29th Mar.
9	Higher Lane, Fazakerley ...	,, ...	Mumps	,, 29th Mar.
9	Higher Lane, Fazakerley ...	Whole School	,,	Fourteen days. (See 19th Mar.)
9	Soho Square Council	Infant	Measles, Whooping Cough, &c.	Until 29th Mar.
9	Walton Lane Council	,, ...	Measles, &c.	,, 29th Mar.
10	Chatsworth Street Council...	,, ...	,,	Fourteen days.
11	Upper Park Street Council	,, ...	,,	Until 29th Mar.
11	Queen's Road Council	,, ...	,,	,, 29th Mar.
12	*All Schools*	,, ...	Measles ...	,, 29th Mar.

Date of Notice.		School.	Department or Departments.	Nature of Disease.	Period of Closure.
Mar.	19	Higher Lane, Fazakerley ...	Mixed	Mumps, &c.	Fourteen days.
	24	*All Schools*	Infant	Measles ...	Until after Easter Holidays.
May	18	Broadgreen Road Council	,, ...	Measles, &c.	Fourteen days.
	18	Caledonian	,, ...	,,	,,
	18	St. Stephen's, Smithdown Lane	,, ...	,,	,,
	19	St. Margaret's, Prince's Road	Kinder-garten Section	Measles ...	,,
	19	St. Anne's, Derby Lane ...	Infant	,,	,,
	28	Aspen Grove H.G.	,, ...	Measles, &c.	,,
June	15	Tiber Street Council	,, ...	,,	Until after Summer Holidays.
	15	Granby Street Council	,, ...	,,	,,
	15	Venice Street Council.....	,, ...	,,	,,
	15	St. Clement's, Dove Street	,, ...	,,	,,
	15	St. Mary's, Everton Valley	,, ...	,,	,,
	15	Christ Church, Aughton Street	,, ...	,,	,,
	15	St. Polycarp's, Gordon Street	,, ...	,,	,,
	15	St. Sebastian's, Lockerby Road	,, ...	,,	,,
	17	Banks Road Council	,, ...	,,	,,
	18	St. Martin's, Blenheim Street	,, ...	,,	,,
	18	Monk Street Council	,, ...	,,	,,
	23	St. Bride's ,Grey Street ...	,, ...	,,	,,
	25	Anfield Road Council	,, ...	,,	,,
Oct.	1	Higher Lane, Fazakerley ...	,, ...	Measles ...	Until 18th Oct.
Nov.	16	St. John's, Rice Lane	,, ...	Measles, &c.	,, 6th Dec.
	22	St. Paul's, West Derby	,, ...	Whooping Cough, &c.	Fourteen days.
	30	Granton Road Council	,, ...	Measles, &c.	Until after Christmas Holidays.
	30	Blessed Sacrament, Walton	,, ...	Measles, &c.	,,

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The medical inspection of school-children has helped the administration of the Children Act of 1908, and the Liverpool Corporation (General Powers) Act of 1908, in dealing with children who are sent to school in a filthy and verminous condition. The condition is an illustration of the miseries to which neglected children of school age are subjected. To a less extent the work has also helped to bring to light many cases of neglect of children below school age, and although these children are unhappily not included within the scope of the Acts mentioned, an endeavour has been made to improve the conditions under which these also were living—a more difficult procedure, as they are not under the daily observation which obtains in the case of school children.

It would appear that the duty of making provision for the cleansing of verminous children devolves upon the Education Authority. So far the Education Authority have given the necessary permission for the work to be done, and the Baths Committee have sanctioned the cleansing of a certain number of children at the Mansfield Street Baths. The bulk of the work, however, has been undertaken solely by the Health Committee, who have authorised members of their staff to convey children to the Charters Street Disinfecting Station, where special washing accommodation is provided. Practically the entire cost of wages, transport, and washing accommodation has been provided by the Health Committee. The staff engaged, notably the Female Staff, has rendered most valuable assistance, many times supplementing their actual duties by supplying food and other necessaries for the children.

So far as it has gone, the work has been good and effective, but it is very far from meeting the pressing necessities of the case, and it is absolutely necessary, in order to efficiently cope with it, that more suitable bathing establishments should be available.

At present bathing facilities are provided for children in various parts of the city, but it is questionable whether it would be desirable to identify these places as depôts for the cleansing of verminous children, unless after some special adaptation for the purpose, such as the provision of separate washing places with separate entrance. This observation would apply alike to baths and wash-houses, and to washing places in connection with the Day Industrial Schools. It does not appear desirable to associate this particular measure with the ordinary bathing and washing accommodation for ordinary persons of cleanly habit.

It has been suggested that the whole of the cost should be borne by the Education Committee, but this does not appear to be altogether an equitable proposal, since large numbers of children of the poorest class, with whom the Education Committee have no concern whatever, are also neglected and verminous, and these will continue to be dealt with as heretofore under the instructions of the Health Committee. Towards the close of the year, endeavours were made to arrange a meeting upon the subject between the Chairmen of the three Committees concerned, viz., the Health, Baths, and Education Committees, with a view to concerted action, and plans have been prepared of suitable washing places in connection with the Mansfield Street establishment, but yet separate from the ordinary bathing departments.

Almost invariably with this form of child neglect, as with the somewhat analogous cases of neglecting to provide food, there is a history of drink. Again and again, the fact that the mother or father or both are heavy drinkers whenever money can be got, is noted in connection with this condition.

The benefits arising from a thorough cleansing of the body and clothes have been appreciated by the children themselves, and from time to time children present themselves at the Depot of their own accord, and request that they may be cleansed again.

The staff continue as before to visit cases of communicable skin and eye conditions, and the following table shows the number of school cases visited during the last three years:—

	1907.	1908.	1909.
Ringworm	1,977	1,684	2,168
Itch	235	468	571
Sore Eyes	3,404	2,056	3,003
Sore Heads, Impetigo, Eczema, &c.	6,435	3,088	3,860
Other Skin Diseases		2,253	1,820
Verminous cases	4,550	643	2,681
Neglect cases		1,412	2,923
Total	16,601	11,404	17,026

Although most of these cases are reported from the Education Department, yet a very large number are referred to the office of the Medical Officer of Health by nurses and others who are more or less in daily contact with children, such as teachers, visitors, &c., and also by private individuals.

PUBLIC ELEMENTARY SCHOOLS.

In pursuance of the resolution of the Elementary Schools Management Sub-Committee, dated 13th July, 1903, and approved by the Education Committee on the 19th August, 1903, instructing the Medical Officer of Health to report upon the sanitary equipment, &c., of schools, 188 schools were fully reported upon.

Full Reports were printed by the Education Committee, and circulated to those interested.

All the Public Elementary Schools in the City are visited once each fortnight and an examination made of the sanitary conveniences. These visits, made by Sanitary Inspectors, reached the following numbers:—

	1908.	1909.
No. of Visits to Schools	2,681	2,730
,, found incorrect	126	160
,, Water-closets and Latrines found dirty or defective	182	217
,, Notices issued for defects	175	252
,, ,, ,, dirty closets	3	—

NOTICES TO MASTERS OF SCHOOLS.

The arrangements have been continued with the Education Committee that notice shall be sent to the Committee and postcards to the Head Masters of the various schools informing them when children from infected houses attend their schools. 12,859 cards were sent last year, as against 12,947 in the preceding year.

THE AMBULANCE AND DISINFECTING STAFF.

The following table shows the number of patients removed to Hospitals during 1909, compared with the number removed during the preceding year, by Officers of the Ambulance Staff, and the Hospitals to which they were taken :—

City Hospital North, Netherfield Road.	City Hospital South, Grafton Street.	City Hospital, Park Hill.	Brownlow Hill.	City Hospital East, Mill Lane.	David Lewis Northern Hospital.	Royal Infirmary.	Smithdown Road.	Southern Hospital.	City Hospital, Fazakerley.	Port Sanitary Hospital.	Hahnemann Hospital.	St. Paul's Eye & Ear Hospital.	Fazakerley Annexe.	Total.
870	582	1189	2	959	—	4	1	3	1309	14	—	—	360	5,293

PRECEDING YEAR.

829	739	747	—	1014	19	20	—	2	1427	17	5	5	251	5,075

For the removal of patients to hospital, and for the removal of infected bedding, and its return after disinfection, an adequate ambulance staff is maintained. There are eight ambulances provided for the removal of infectious patients to hospital, and as far as possible one ambulance is reserved for each form of disease. In every case the ambulance is cleansed and disinfected in the following way each time it is used and before it is used for another patient.

The rugs in which the patient is wrapped are left for disinfection at the hospital to which the patient is taken. The interior of the ambulance (which is of smooth varnished wood) is sponged down with a strong solution of formalin. A clean disinfected rug is supplied before another patient is removed.

The ambulance attendants and disinfecting staff are provided with sufficient suits of overalls for their purposes.

Bedding and clothing, after disinfection, are returned home by a staff and conveyance entirely distinct from that which removed them in the infected state. In all cases where it is found desirable to destroy infected articles full compensation is paid, as provided for by the Public Health Act.

Details of the methods employed in regard to Smallpox and Typhus Fever have been given in previous Annual Reports, in which also the general procedure in disinfection has been explained.

INFECTED PREMISES STRIPPED AND DISINFECTED BY STRIPPING STAFF.

	1908.	1909.
Houses	8,238	8,939
Rooms Stripped or sprayed with solution of Perchloride of Mercury	26,098	28,129
,, Disinfected with sulphurous gas	8,040	9,558
Number of Notes to Owners after stripping and cleansing	2,665	2,726
,, Visits by Superintendent of Staff	2,005	1,971
,, Enquiries respecting disinfection	9,063	11,126

LIBRARY BOOKS FOUND IN INFECTED HOUSES.

Number of Library Books disinfected	1,270	1,674
,, ,, ,, destroyed	—	68
Amount paid as compensation	—	£6 14/6

For a number of years it has been the practice to inquire for library books at every house where infectious disease is reported, and to remove from the house any books found. The inquiry also determines whether or not the books have been used by the patient, or have been in the sick room, and incidentally the character of the house and of the occupants is reported upon, and further information for other purposes ascertained.

The manner in which the books are dealt with may be summarised as follows:—

All books which are much worn and soiled are destroyed. All books taken from houses in which small-pox has occurred are destroyed. All books which have been used in the sick room, if there is a possibility, however remote, of their conveying infection are dealt with in the same way.

In all of these cases compensation is paid by the Local Sanitary Authority as Clause 121 of the Public Health Act is held to include books, although no specific reference to them occurs in the Act. The compensation is fixed by the Libraries Committee, an intimation being forwarded that certain books have been destroyed. The Librarian attaches to the intimation form what he considers the value of the books, and that valuation has never been called into question.

With regard to volumes which, although taken from infected houses, have but a very remote likelihood of having retained infection, a system of disinfection is resorted to. The book is placed on end and opened as far as can be, in a case, and is subjected to the vapour of formalin for three hours. This process, if necessary, can be repeated, and the books are returned to the library none the worse for the operation with the exception of a smell of formalin, which passes off after a few days.

The Medical Officer is unable to recall a single instance in which infection has been conveyed by books, notwithstanding that he has instituted from time to time inquiries as to the antecedent history of books taken from infected houses. Books which are too good to destroy are sometimes sent to the Fever Hospitals.

The degree of exposure of books whilst in infected houses varies very widely, and it is not desirable to make any hard and fast rule as to how books from infected houses should be dealt with. There can be no question that the method which has stood the test of so many years may continue to be relied upon, and it is one which is now adopted in a number of great cities, such as Manchester, Bradford, Leeds, Glasgow, and Edinburgh, whilst it is interesting to note that in America there is a growing tendency to attach relatively small importance to the rôle played by books in the dissemination of sickness.

THE DISINFECTING APPARATUS.

The number of articles disinfected at the various apparatus during the year amounted to 63,149, and consisted of the following articles:—

Date. 1909.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	No. of Pieces of Wearing Apparel.	Total Number of Articles.
January	544	86	3,296	1,466	5,392
February	423	59	2,731	1,069	4,282
March	426	116	2,821	2,366	5,729
April	464	93	2,775	1,082	4,414
May	673	131	4,002	1,178	5,984
June	664	87	4,149	3,535	8,435
July	552	119	2,725	1,085	4,481
August	367	93	2,019	853	3,332
September	443	48	2,234	1,179	3,904
October	596	105	3,080	1,539	5,320
November	473	84	2,831	1,327	4,715
December	559	105	3,272	3,225	7,161
Totals	6,184	1,126	35,935	19,904	63,149

The number of articles destroyed at the various apparatus during the year amounted to 1,409, compensation being paid in conformity with the provisions of the Public Health Act. Details are as follows:—

Date. 1909.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	No. of Pieces of Wearing Apparel.	Total Number of Articles.
January	30	28	48	2	108
February	23	19	26	3	71
March	28	36	58	1	123
April	27	34	42	—	103
May	42	48	92	5	187
June	17	21	35	1	74
July	26	27	57	1	111
August	19	30	31	3	83
September	25	31	61	4	121
October	29	46	69	1	145
November	38	30	85	28	181
December	21	18	63	—	102
Totals	325	368	667	49	1,409

PRINCE'S DOCK MORTUARY.

The Mortuary at the Prince's Dock is for the reception of the bodies of persons who have been drowned, killed, &c., and upon which the Coroner desires to hold inquests. Bodies are taken to this Mortuary by the police, and when it may be necessary to make post-mortem examinations, any medical gentleman may have the assistance of an inspector on sending a communication to the Ambulance Superintendent, 54, Gascoyne Street.

BODIES REMOVED TO THE PRINCE'S DOCK MORTUARY.		
Number from River.	Number from City.	Total.
8	268	276

FORD STREET MORTUARY AND DISTRICT MORTUARIES.

BODIES REMOVED TO MORTUARIES.						
Green Lane.	Lark Lane.	Wavertree.	Ford Street.	Park Hill.	Smithdown Road.	Total.
—	1	—	235	—	—	236

The Mortuary in Ford Street is provided for the reception of bodies, which cannot be kept at the homes in which death had taken place, without injury to the health of the inmates. The address of the caretaker is 6, Pickering Street.

The District Mortuaries, it will be seen, are seldom used. For the convenience of juries, as well as for other reasons, it is preferable that bodies should be conveyed to the Central Mortuaries.

The method of transport of the bodies of persons killed, or found dead in the street, has been more adequately provided for.

Two alternative plans suggested themselves, one being that a hearse should be provided by the Health Committee, to be kept at some suitable depôt where it could be obtained upon receipt of a telephone message from the Police; the other, and better arrangement, was to authorise

the Head Constable to make arrangements with certain firms of undertakers in suitable parts of the City, to supply a hearse on short notice, together with a shell coffin, for these purposes.

This latter plan is expeditious, inasmuch as shorter distances have to be travelled by the hearse to the place where the body is lying; it is working well.

PROCEEDINGS UNDER THE DISEASES OF ANIMALS ACTS, 1894 TO 1903.

The duties of the Inspectors under the Diseases of Animals Acts, 1894 to 1903, are to visit cattle steamers, both foreign and cross-Channel, for the purpose of seeing that the provisions of the Foreign Animals Order, 1895, and the Animals (Transit and General) Amendment Order, 1904, are carried out.

Cattle steamers are examined as to fittings, ventilation, &c., and supervision is exercised in regard to cleansing and disinfection after animals are landed. Overcrowding or injury to animals is reported.

The Animals (Transit and General) Order compels the master of the vessel to slaughter all seriously-injured animals forthwith. Such animals are slaughtered on board the vessel, and the carcases removed to the abattoirs.

Cattle trucks and horse boxes are examined at railway stations, as to fittings, cleansing and disinfection, and the railway pens supervised.

Lairages and sale yards are visited to ascertain if they are cleansed and disinfected in accordance with the regulations of the City Council.

The Diseases of Animals Act relates in the main to certain diseases communicable amongst cattle, sheep and swine, and provides for the separation of diseased animals from healthy ones, for the disinfection and cleansing of vessels, trucks, &c., in which animals have been carried, and it defines the action to be taken to limit and prevent the extension of disease. It also deals with certain forms of disease communicable by animals to man.

The Board of Agriculture, under the powers of this Act, issue orders from time to time dealing with diseases of animals, or with their protection during transit. The Board also prescribes the manner under which animals may be imported or moved from place to place.

The Swine Fever Order, 1901, makes provision for the cleansing and disinfection of pig dealers' premises, and vehicles used by pig dealers, for the conveyance of swine from steamers through the City to pig dealers' premises.

The Sheep Dipping (North of England and Scotland) Order, which came into force on April 9th, 1906, provides that all sheep within the prescribed area, which includes Liverpool, shall be dipped twice during the year.

The Swine Fever (Movement from Ireland) Order of 1904 (No. 6866) provides that pigs brought from Ireland for slaughter shall be accompanied by a license, authorising such landing, issued by the Inspector of the Department of Agriculture and Technical Instruction for Ireland. The swine shall be marked by, and at the expense of, the owner, who resides in Ireland, by painting with an indelible composition of red colour, with a broad line down the back, and across the loins, not less than nine inches long; failing such the owner is liable to a penalty of £20. The Inspector of the Board in Ireland will not issue a license unless he is satisfied that the pig is properly marked. These pigs must only be moved for the purpose of slaughter.

No pigs have been landed in Liverpool from Ireland without being properly marked in accordance with the Order.

The accompanying table gives the result of the visits made under the Acts or under the Orders of the Board of Agriculture:—

	1908.	1909.
Number of Visits and revisits to Railway Stations, including inspections made on Sundays ...	3,161	3,073
,, Inspections and reinspections of Pens ...	107,853	107,793
,, found clean	79,236	78,646
,, ,, dirty and cleansed before being used...	28,617	29,147
,, Inspections and reinspections of Trucks ...	48,928	50,550
,, found clean	41,444	43,448

	1908.	1909.
Number found dirty and cleansed before being used...	7,457	7,102
,, ,, leaving the City before being cleansed,	27	347
,, Inspections and reinspections of Horse Boxes	472	1,306
,, found clean	271	977
,, ,, dirty and cleansed before being used	183	297
,, ,, ,, not ,, ,, ,, ,,	18	32
,, Inspections and reinspections of Vessels ...	8,258	5,452
,, found clean	3,652	3,081
,, ,, dirty and cleansed before being used	4,507	2,342
,, ,, going to Sea before being cleansed, without cattle or cargo	99	29
,, Inspections and reinspections of Gangways...	8,770	4,761
,, found clean	6,925	2,554
,, ,, dirty and cleansed before being used...	1,845	2,207
,, Inspections and reinspections of Lairages and Sale Yards	5,280	6,124
,, found clean	3,360	3,622
,, ,, dirty and cleansed before being used...	1,920	2,502
,, Carts used to convey Pigs, inspections and re-inspections	2,458	1,979
,, found clean	2,147	1,972
,, dirty and cleansed before being used.. ...	311	7
,, of visits to Manure yards and wharves ...	499	666

INSPECTION OF SLAUGHTER-HOUSES, &c.	1908.	1909.
Number of Visits to Slaughter-houses made by Meat Inspectors	7,121	6,436
Number of Visits to Butchers' Shops made by Meat Inspectors	66,884	63,483
Number of Visits to Fish and Fruit Shops made by Fish Inspectors	56,873	58,345
Number of Visits to Fruit Shops made by Fruit Inspector	15,348	20,916

FOOD HAWKERS' PREMISES.

	1908.	1909.
Number of Visits made by District Sanitary Inspectors...	199	1,119

FISH PLATFORMS.

Number of Visits made by District Sanitary Inspectors...	31	28

POULTRY DEPOTS.

Number of Visits made by District Sanitary Inspectors...	486	467

INSPECTION OF MEAT, FISH, FRUIT AND GENERAL FOOD STUFFS.

The supervision, as regards soundness, of meat, fish, &c., stored or offered for sale in the City, has been carried out with care during the year. This inspection has been much facilitated by the Public Health (Unsound Food and Foreign Meat) Regulations which came into force in the beginning of the year. These Regulations affected very considerably the importation and sale of meats, chiefly pork, in this City and country generally.

During the short time in which they have been in operation they have done much to check the importation and sale of unwholesome food.

It was found advisable in the interests of general food inspection in this City and Port to amalgamate the inspectorial staffs. This was done in the early part of the year and the arrangement has been found of much service in detecting and following up diseased and doubtful consignments, or where goods require to be passed on to stores to be sorted or dealt with under the supervision of the inspectors.

Frequent cross references, as regards meats and goods, pass between the food inspectors of the City and Port. Much time is saved by this means and valuable information obtained on both sides as to the source, character and destination of questionable goods.

The character of imported meat and offal has much improved during the past year; offal is now landed in a form more suitable for examination as regards disease. Boneless beef is required to be imported frozen in its natural shape, with all the lymphatic glands in situ, and not, as formerly, rolled and pressed together into a box and frozen hard.

Carcases of pigs are not admitted into this country unless as whole carcases, salted pork is admitted if the lymphatic glands are present in

situ, but pork frozen in boxes is only admissible if an "official" certificate is attached as evidence that the pig from which the meat is derived has been certified as absolutely free from disease at the time of slaughter.

RETURNS OF ANIMALS KILLED IN THE CITY SLAUGHTER-HOUSES, AND OF MEAT IMPORTED FOR SALE.

The number of fat cattle from local dairies slaughtered in the City during 1909 was 1,578, as compared with 1,366 in 1908.

The small number of cattle slaughtered in the City is probably due to the importation of States cattle, and also to the importation of frozen meat chiefly from the River Plate district.

There is a large increase in the number of sheep slaughtered, and an increase in the number imported, as compared with the year 1908.

With regard to pigs, it will be noticed that there is a decrease in the number killed in the City, and a large decrease in the number imported.

Large numbers of carcases of pigs were imported during the latter part of the year 1908, no doubt in anticipation of the Food Regulations becoming law. As many as 11,278 were landed at this port and stored in the city. These were put on the market during 1909.

There were 5,622 boxes of beef offal received for sale at the Abattoir.

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale.			
						Beasts.	Sheep.	Calves.	Pigs.
Abattoir.	3908	239481	—	18581	29904	48131	356136	2079	11278
Allerton Road, Wavertree ...	527	4587	60	26	135	...	...	...	...
Back Castle Street	451	5	...	415	...	...	...	...	...
Back Commutation Row.....	...	...	...	...	...	...	...	...	...
Back Mount Vernon Green...	209	2332	273	3	...	...	...	...	...
Bevington Hill	248	4	...	286	...	...	...	...	...
Brecon Street.....	154	714	71	5	...	...	...	...	...
Copperas Hill.....	...	...	...	...	5354	...	...	...	...
Corlett Street.....	2	2039	565	3	...	...	...	...	...
Cotter Street	...	...	...	...	...	...	...	...	...
Carried forward	1591	9681	969	738	5489	48131	356136	2079	11278

RETURNS OF ANIMALS KILLED IN THE CITY SLAUGHTER HOUSES AND OF MEAT IMPORTED FOR SALE—*Continued.*

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale.			
						Beasts.	Sheep.	Calves.	Pigs.
Brought forward	1591	9681	969	738	5489	48131	356136	2079	11278
Derby Lane, Old Swan.....	...	671	212	...	...	...	...	...	...
Edgeware Street	88	294	153	...	...	...	...	...	...
Foley Street	...	...	...	...	5254	...	...	...	...
Frederick Street.....	1	2183	93	...	334	...	...	...	...
101, High Street, Wavertree..	...	...	...	...	...	...	...	...	...
105, High Street, Wavertree.	55	118	16	5	17	...	...	...	..
Norman Street	...	...	...	...	1357	...	...	...	..
Peel Street	1	595	115	...	2	...	...	...	..
Prescot Road, Knotty Ash ...	4	689	143	15	46	...	...	...	...
Sandown Lane, Wavertree ...	6	35	...	...	...	...	...	...	...
Sidwell Street, Garston	94	68	...	3	176	...	...	...	...
Soho Street.....	...	...	...	...	2828	...	...	...	...
St. Mary's Road, Garston ...	17	...	1	2	20	...	...	...	...
Upper Milk Street.....	...	...	...	...	6174	...	...	...	...
West Derby Road, Tue Brook	200	2045	375	3	159	...	...	...	...
Total in Private Slaughter-houses	2057	16379	2077	766	21856	...	...	...	...
Total in the City	5965	255860	2077	19347	51760	48131	356136	2079	11278

PRECEDING YEAR.

Total in Private Slaughter-houses	2177	15791	2877	1477	22540	...	...	...	...
Total in the City	5465	189470	2877	19163	64144	47305	346329	1018	19811

UNWHOLESOME MEAT, FISH, FRUIT, &c., CONDEMNED AND DESTROYED.

	DATE.—1909.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell fish.	Fruit.	Miscellaneous.
		Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags	Lbs.	
Markets.	St. John's	2136	34	188	317	555	409	146551	71	23809	1900 Oysters. 40 lbs, Venison.
	North Haymarket	...	...	...	...	...	...	320	...	69946	
Slaughter-Houses.	Abattoir	170741	6186	26629	14815	...	24	...	...	...	...
	Allerton Road	379	...	...	...	...	...	...	...	...	...
	Back Castle Street	42595	1369	...	40	...	...	...	...	...	...
	Bevington Hill	7078	778	88	...	...	...	...	...	...	...
	Brecon Street	928	4	28	...	...	...	...	...	...	...
	Copperas Hill	...	...	...	7712	...	...	...	...	...	...
	Foley Street	...	...	...	644	...	...	...	...	...	...
	Norman Street	...	...	...	164	...	...	...	...	...	...
	Sidwell St., Garston	140	...	...	6	...	...	...	...	...	...
	Soho Street	115	...	...	371	...	...	...	...	...	...
	Albert Dock (Cold Storage)	164	...	...	...	...	2566	250	...	...	...
	Atherton Street	...	...	...	759	...	...	...	...	...	...
	Berry Street	...	...	...	...	...	...	...	...	4	...
	Blessington Road	...	...	...	...	...	...	...	...	32	...
	Birkett Street	...	...	...	12	...	...	...	...	...	...
	Boaler Street	13	...	...	...	...	...	...	...	...	...
	Breck Road	27	...	12	...	...	...	...	...	...	...
	Bronte Street	2836	...	...	...	...	...	...	...	...	...
	Brownlow Street	...	...	...	...	...	...	...	...	120	...
	Brunswick Road	22	...	...	...	...	...	...	...	...	...
	Carried forward	227174	8371	26945	24840	555	2999	147121	71	93911	1900 Oysters. 40 lbs Venison.

UNWHOLESOME MEAT, FISH, FRUIT, &c., CONDEMNED AND DESTROYED.—*Contd.*

DATE.—1909.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous,
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags	Lbs.	
Brought forward ...	227174	8371	26945	24840	555	2999	147121	71	93911	1900 Oysters. 40 lbs. Venison.
Byrom Street	...	...	...	66	...	...	1200	...	...	...
Canada Dock (Cold Stores)	1860	...	...	...	...	...	...	...	...	...
Castle Street	1771	...	...	...	...	...	...	...	...	...
Cazneau Street	...	...	...	...	...	128	...	...	5820	...
Chatsworth Street	9	...	...	...	...	...	...	...	...	...
Christian Street	...	...	...	3	...	...	...	...	...	...
Clare Street.....	...	...	4	...	...	...	...	...	...	...
Cleveland Square	260	...	124	78	...	...	...	...	...	...
County Road.....	70	...	14	...	...	...	...	...	...	...
Crosshall Street	...	...	...	...	6	...	...	...	...	...
Cumberland Street	...	...	...	...	...	...	...	...	16841	40000 Eggs.
Dale Street (The Temple)	3520	...	...	...	...	...	...	...	...	...
Dart Street	...	...	...	8	...	...	...	...	...	...
Daulby Street.....	724	...	...	...	...	...	...	...	...	...
Durning Road.....	...	...	10	...	...	...	...	...	...	...
Earle Road	...	...	...	5	...	...	...	...	...	...
Edge Hill Station	...	...	...	...	...	...	98	...	874	...
Elliot Street	...	...	...	...	...	...	774	...	...	...
Fairclough Lane.....	...	...	...	...	...	...	1400	...	...	...
Falkner Street	4	...	9	...	...	...	...	...	...	...
Fox Street	12	...	...	...	...	...	...	...	...	...
Carried forward ...	235404	8371	27106	25000	561	3127	150593	71	117446	1900 Oysters. 40 lbs. Venison. 40000 Eggs.

UNWHOLESOME MEAT, FISH, FRUIT, &c., CONDEMNED AND DESTROYED.—*Contd.*

DATE.—1909.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags.	Lbs.	
Brought forward ...	235404	8371	27106	25000	561	3127	150593	71	117446	1900 Oysters. 40 lbs Venison 40000 Eggs.
Frederick Street.....	...	...	...	4	...	...	...	...	...	...
Gay Street	...	...	...	...	...	...	...	...	128	...
Gerald Street	...	...	...	...	...	...	...	...	980	...
Gill Street	908	...	...	...	...	...	...	...	...	...
Gt. Charlotte Street	168	...	...	27	...	...	6191	...	4539	...
Gt. Homer Street	273	...	613	4	...	...	...	...	30	...
Gt. Howard Street.....	47	...	...	...	...	...	...	...	...	...
Heyworth Street	28	...	...	...	...	...	...	...	...	...
High Street.....	...	...	...	91	...	...	...	...	...	...
Hilbre Street	...	...	...	...	62	...	...	...	...	...
Holt Road	24	...	...	...	...	...	...	...	...	...
Houghton Street	...	...	...	...	48	...	96	...	...	...
Islington	40	...	...	...	...	...	...	...	...	...
Kensington	43	...	...	...	...	...	...	...	...	...
King Street	11	...	...	...	...	...	...	...	8583	...
Kirkdale Road.....	14	...	...	...	...	...	...	...	...	...
Langsdale Street.....	30	...	...	...	...	...	...	...	...	...
Leece Street	...	...	...	...	12	...	...	...	...	...
Lime Street Station	...	...	...	336	...	...	5754	1	...	...
Lodge Lane.....	12	...	18	...	...	...	...	...	...	...
London Road	143	...	38	...	...	...	...	...	...	...
Carried forward ...	237145	8371	27775	25462	683	3127	162634	72	131706	1900 Oysters 40 lbs. Venison. 40000 Eggs.

UNWHOLESOME MEAT, FISH, FRUIT, &c., CONDEMNED AND DESTROYED.—*Contd.*

DATE.—1909.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry. 30	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags.	Lbs.	
Brought forward ...	237145	8371	27775	25462	683	3127	162634	72	131706	1900 Oysters. 401bs. Venison. 40000 Eggs.
Love Lane.....	...	...	432	...	...	...	...	...	3156	...
Low Hill	...	...	...	...	...	...	30	...	...	...
Maddrell Street	...	...	...	...	...	...	...	..	1840	...
Market Street	...	...	...	...	54	...	...	...	...	...
Matthew Street	...	...	...	...	...	...	...	...	4949	...
Mill Street	59	...	34	5	...	...	...	...	60	56 lbs. Cheese.
Moor Place	...	...	...	12	...	...	...	...	...	...
North Hill Street.....	...	...	12	...	...	...	...	...	...	...
Oldhall Street.....	14	...	...	...	...	...	...	...	...	...
Overbury Street	5	...	...	...	...	...	...	...	...	...
Paddington	229	...	...	...	...	...	...	...	...	...
Park Road	...	...	8	5	...	...	...	...	...	...
Peel Street	...	...	60	...	...	...	...	...	...	...
Penrith Street.....	...	...	6	...	...	...	...	...	...	...
Picton Road	32	...	6	...	...	...	...	...	...	...
Pitt Street	...	...	90	...	...	...	...	...	...	...
Preeson's Row	...	...	...	10	...	...	...	...	...	...
Prescot Road	63	...	...	...	...	...	...	...	...	...
Prescot Street.....	12	...	...	...	...	...	...	...	...	...
Prince's Jetty.....	827	...	...	...	...	...	...	...	...	...
Queen Square	...	...	...	...	...	...	...	...	63741	...
Rainford Gardens	...	...	...	...	...	...	...	...	1240	...
Total	238386	8371	28423	25494	737	3127	162664	72	206692	1900 Oysters. 401bs. Venison. 40000 Eggs. 561bs. Cheese.

UNWHOLESOME MEAT, FISH, FRUIT, &c., CONDEMNED AND DESTROYED.—*Contd.*

DATE.—1909.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscllaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags.	Lbs.	
Brought forward ...	238386	8371	28423	25494	737	3127	162664	72	206692	1900 Oysters. 40lbs. Venison, 40000 Eggs. 56 los. Cheese.
Rainford Square.....	...	...	...	...	...	...	...	...	560	...
Ranelagh Street	...	...	...	...	...	...	320	...	...	...
Redfern Street	2560	...	223	...	...	...	...	...	...	...
(Cold Storage) Regent Road	15157	...	660	...	...	...	...	...	...	...
(Cold Storage) Richmond Row	195	...	1757	...	...	...	...	...	...	...
Roberts Street	...	...	...	...	...	...	...	...	1040	...
Roe Street	...	...	...	...	...	...	336	...	350	...
Rose Lane	20	...	...	...	...	...	...	...	...	...
Rose Street	...	...	...	...	51	187	42559	...	...	...
St. Andrew Street	32	...	...	9	...	...	...	...	...	...
St. James Place'.....	10	...	...	...	...	...	...	...	...	...
St. James Street'.....	20	...	14	...	...	...	...	...	...	...
St. John's Lane	...	...	...	...	...	...	...	...	2040	...
St. Mary's Road.....	54	...	...	7	...	...	...	...	...	...
Scotland Road	921	...	200	...	...	...	13	...	...	...
Sir Thomas Street	..	...	...	...	...	...	...	...	38118	...
Smithdown Lane	12	...	...	...	...	...	...	...	...	...
Smithdown Road	...	75	36	...	...	...	...	...	...	...
Soho Street	...	...	20	...	...	...	13	...	...	...
Springfield Street	32	...	...	4	...	...	...	...	...	...
Stanley Road	56	...	...	...	...	...	...	...	..	...
Stanley Street	...	...	...	...	...	...	...	...	98222	...
Total	257455	8446	31333	25514	788	3314	205905	72	347022	1900 Oysters. 40lbs. Venison. 40000 Eggs. 56lbs. Cheese.

UNWHOLESOME MEAT, FISH, FRUIT, &c., CONDEMNED AND DESTROYED.—*Contd.*

DATE.—1909.	Beef.	Veal.	Mutton and Lamb.	Pork.	Poultry.	Rabbits and Hares.	Fish.	Shell-Fish.	Fruit.	Miscellaneous.
	Lbs.	Lbs.	Lbs.	Lbs.	Head	Head	Lbs.	Bags	Lbs	
Brought forward ...	257455	8446	31333	25514	788	3314	205905	72	347022	1900 Oysters. 40lbs. Venison. 40000 Eggs. 56lbs. Cheese.
Temple Court	...	...	...	...	...	...	...	...	38604	...
Thomas Street	...	...	...	...	...	...	...	...	120	...
Tithebarn Street.....	...	...	...	...	...	...	150	...	...	...
Townsend Lane	5	...	...	...	...	...	...	...	...	...
Trowbridge Street	1087	...	...	...	...	...	...	...	...	...
Tryon Street	...	...	...	...	...	...	...	...	11300	...
Upper Dawson Street ...	...	...	...	...	70	...	...	...	...	...
Upper Frederick Street...	...	...	...	112	...	...	...	...	...	...
Upper Milk Street.....	...	...	...	444	...	...	...	...	...	...
Upper Warwick Street ...	13	...	...	...	...	...	...	...	...	...
Vernon Street	...	...	...	...	...	...	...	...	7420	...
Victoria Street	...	...	...	336	...	...	...	...	14423	...
Walton Road	12	...	...	...	...	...	...	...	...	...
Walton Vale	3	...	...	...	...	...	...	...	...	...
Warwick Street	132	...	...	2	...	...	...	...	...	...
Wavertree Road.....	38	...	14	...	...	...	...	...	...	...
West Derby Road	63	...	39	80	...	...	...	...	...	...
Whitechapel	...	...	...	...	28	...	...	...	...	...
Whitefield Road.....	20	...	...	...	...	...	...	...	...	...
William Henry Street ...	84	...	8	...	...	...	...	...	...	...
Windsor Street	43	...	...	...	...	...	...	...	...	...
Total	258955	8446	31394	26488	886	3314	206055	72	418889	1900 Oysters. 40lbs. Venison. 40000 Eggs. 56lbs. Cheese.

The total amount of Meat, Fish and Fruit, &c., found to be unfit for human food is equivalent to—

	Tons.	Cwts.	Qrs.	Lbs.
Meat	145	1	2	19
Fish	91	19	3	3
Fruit	187	0	0	9

This does not include fish removed as refuse by Officers of the Cleansing and Scavenging Department under the City Engineer.

The great bulk of this material was not exposed for sale, and did not require a Justices' order for its destruction.

The quantity of fish condemned includes both fresh fish and salt fish which had become tainted during transit or storage.

Fish and fruit unfit for human food are removed by the Corporation carts to the Manure Wharf, and there mixed with stable and other light refuse and sold for agricultural purposes. The Wharf is situated on the canal bank, and the manure is loaded into canal boats for conveyance to its destination. The whole of the operation is supervised by officers of the Health Committee.

EXPORT OF HAMS TO ARGENTINA, UNITED STATES, AND PHILIPPINE ISLANDS.

Towards the close of 1907 it was announced that the Government of Argentina proposed to establish a rigid system of inspection of all hams imported into that country. Exporters in this country regarded this decision with some apprehension, as likely to interfere with the importation into Argentina of hams and bacon prepared in this country.

A form of certificate however was devised which met the requirements of the Consul General for Argentina, and received the approval of this Government. This form of certificate has been signed by the Medical

Officer, and has tended so far to remove the apprehended difficulty by giving an assurance of the excellence of the materials and the fitness of the premises on which they are prepared.

A copy of the Regulations issued by the Local Government Board appeared in the Report for 1907.

A declaration and certificate are also now required in connection with the exportation of meat foods to the United States of America and the Philippine Islands.

The regulations made by the Local Government Board are precisely the same as those made in the case of Argentina, with the following addition :—

"The Medical Officer of Health of the district or other certifying officer designated by the Board is required to keep himself informed, by personal enquiry and in other available ways, as to steps taken to ensure that all meat foods prepared or packed for export to the United States and the Philippine Islands are solely the product of animals which, on adequate ante-mortem and post-mortem inspection, have been found free from disease and suitable for human food."

ANIMALS SMOTHERED AND INJURED IN TRANSIT ON BOARD SHIP.

Beasts.	Sheep.	Pigs.	Number found good.	Number found bad.	Weight of bad. lbs.
16	82	92	111	79	6,416

Police proceedings in respect to meat, poultry, fruit, etc., were as follows :—

	1908.	1909.
Number of informations in respect of diseased poultry ...	1	—
,, ,, ,, ,, meat ...	4	4
,, ,, ,, unsound fruit ...	1	—
,, ,, ,, ,, fish ...	—	—
,, ,, ,, ,, butter ...	1	—
Total number of Informations	7	4
Number Fined	6	1
,, Sent to Prison	—	—
,, Withdrawn or Dismissed	1	3
Amount of Fines and Costs	£20 15 1	£1 4 6

	1908.	1909.
Number of carcases surrendered to or seized by Medical Officer of Health and Inspectors	229 Cattle 183 Calves 871 Sheep 247 Pigs 35 Goats	265 Cattle 155 Calves 570 Sheep 174 Pigs. 17 Goats
Total ...	1,565	1,181
* Number of such carcases condemned by Justices under section 117 of the Public Health Act, 1875	2	8
Number of carcases condemned in consequence of the animal having suffered from Tuberculosis	110 Cattle 5 Calves 76 Pigs	147 Cattle 1 Calf 77 Pigs
Total ...	191	225

Of the 147 Tuberculous Cattle condemned, 22 came from local cowsheds, 3 from the Isle of Man, and 122 from Ireland and other places. Of the 77 Pigs, 15 came from local piggeries, 19 from Ireland, 1 from the Isle of Man, 1 from Westmorland, 3 from Preston and 12 from Wales and 26 from Cheshire.

* The remainder were dealt with under a Local Act, which does not require a Justices' Order.



LIVERPOOL ABATTOIR, TROWBRIDGE STREET.
Surrounded by buildings, on streets averaging 28 feet wide.
The entrance is marked by a ×

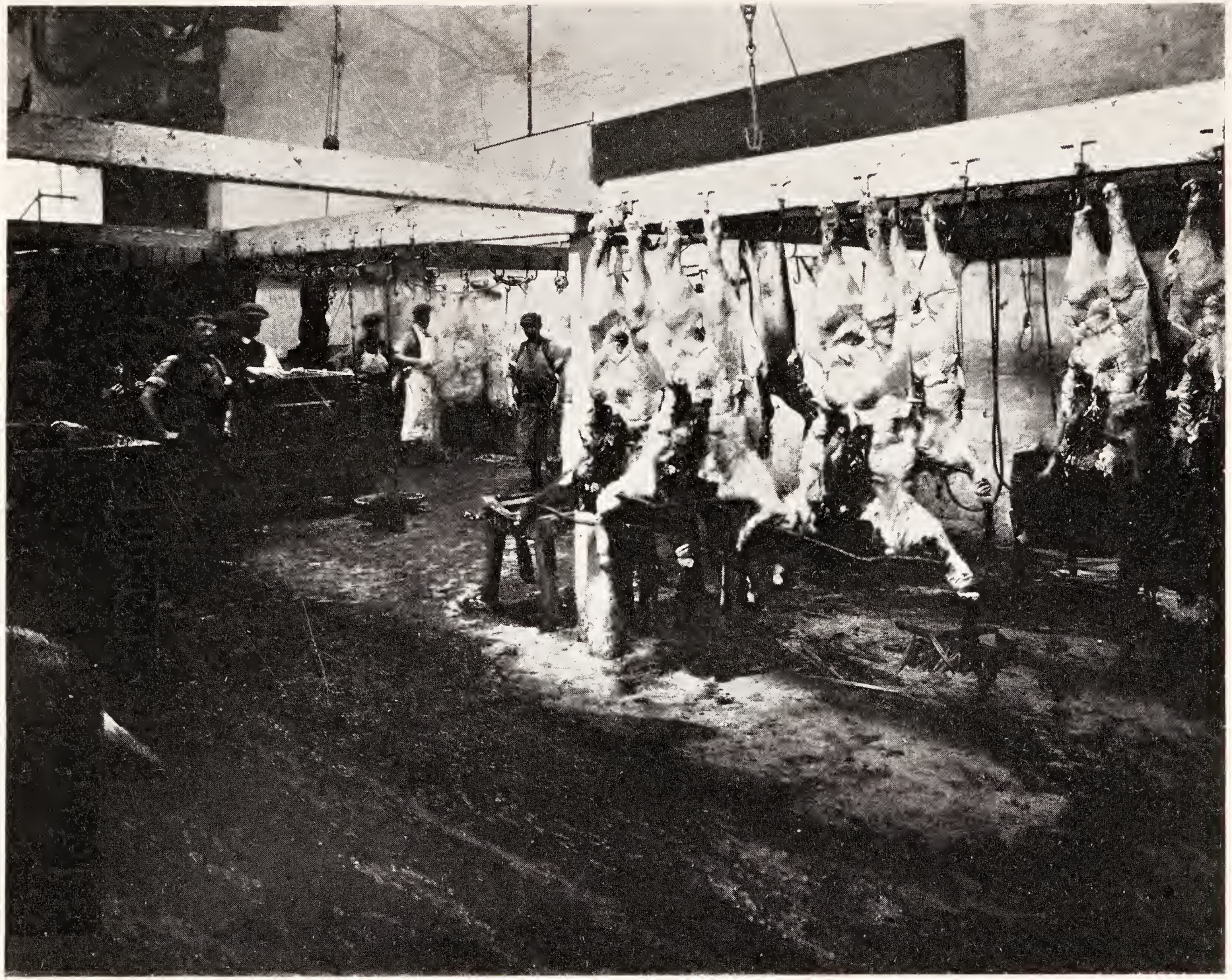
ROYAL SOCIETY OF SURGEONS OF ENGLAND
27 JUL 19
LIBRARY



LIVERPOOL ABATTOIR.

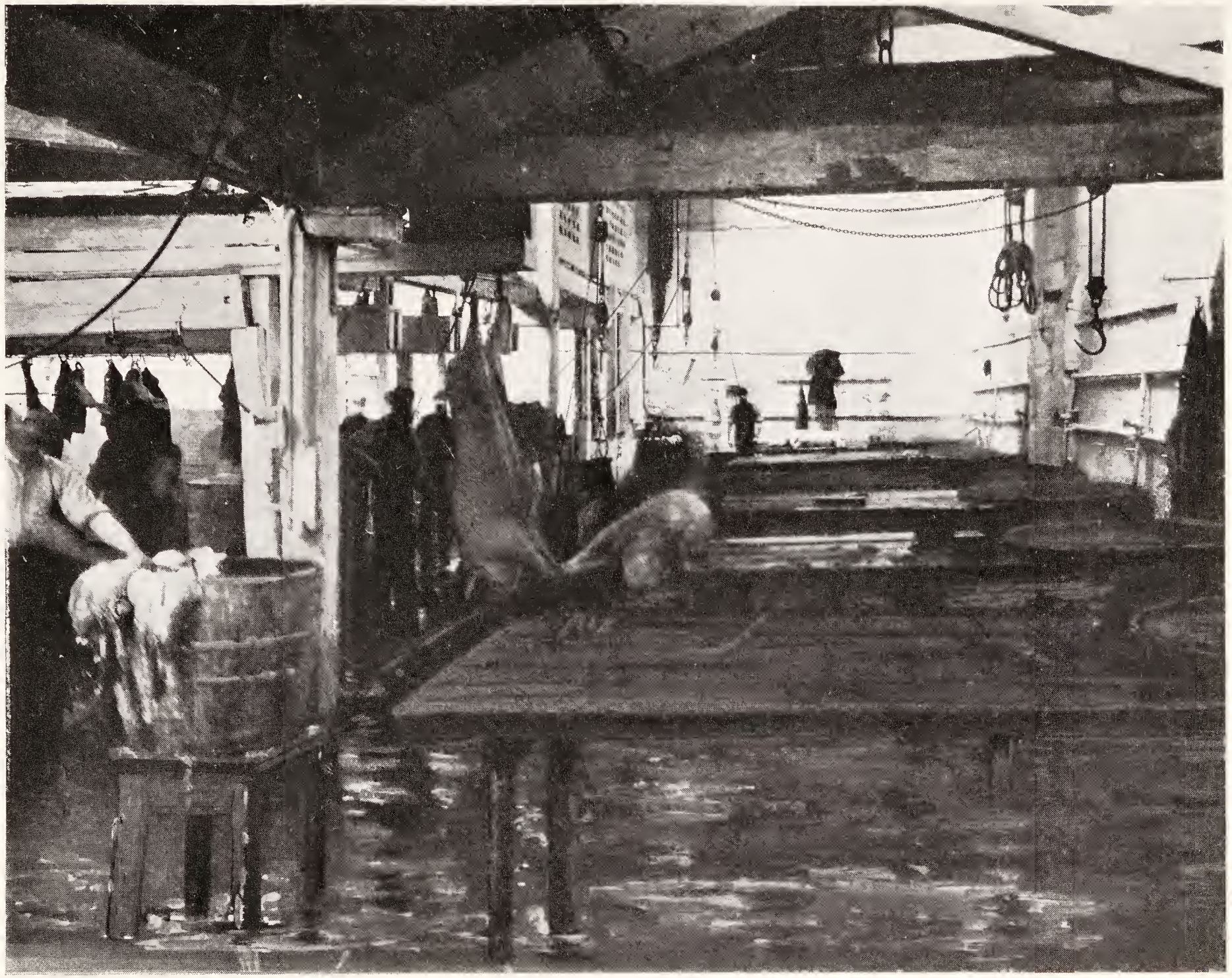
Lairage and Slaughter House for Sheep and Lambs.





LIVERPOOL ABATTOIR.
Lairage and Slaughter House for Calves.

LIBR



LIVERPOOL ABATTOIR.
Pig Slaughter House





VIEW OF A LIVERPOOL PRIVATE SLAUGHTER HOUSE.

GLANDERS AND FARCY.

The Health Committee have made regulations under the Diseases of Animals Act and the Glanders and Farcy Orders of 1896 and 1907 which have been circulated amongst the horse-owners in the city. Accompanying these regulations were notices indicating the means of combating the disease and the necessary precautions to be taken.

The following table indicates the number of affected animals during the last four years. The case in 1909 was discovered at the horse slaughterer's yard, the animal having been removed there, without notification to the Local Authority. Proceedings were taken and the owner fined £5 and 35s. costs.

Year.	No. of Cases.
1906	2
1907	1
1908	—
1909	1

Immediate notification of actual or suspected cases of Glanders is received either from the owner, police, or the Veterinary Surgeon who may be called in to the case, or from the Horse Slaughterer's yard (there is only one in the city).

In further reference to Glanders and Farcy, it may be mentioned that the Veterinary Superintendent has caused the lungs of all horses sent to the Knacker's yard to be submitted to examination, and it is by these inspections that unreported cases are discovered.

This precaution is also taken to ensure owners being immediately notified of the existence of the disease, which may be in a latent state,

and to protect the public from unscrupulous persons who may not conform to the requirements of the act.

Lungs Examined.	Glandered.	Not Affected.
1,958	1	1,957

In addition to the above examination of lungs, the various sale-yards throughout the city were visited and 4,650 horses examined, none of which were found to be affected with any infectious disease.

EXAMINATION OF CATTLE AND SHEEP.

At the Liverpool Cattle Market during 1909, the following animals were inspected by Veterinary Surgeons of the Corporation:—

Cattle	49,621
Sheep	420,729
Calves	—
Other Animals	19

No cases of infectious disease were found.

LIVERPOOL PARASITIC MANGE ORDER, 1908.

Under this Order Veterinary examinations are made of all animals suspected of being affected with Parasitic Mange, and in the case of affected animals they are immediately isolated and kept under observation until the disease has entirely disappeared. Thorough disinfection of the premises, harness, utensils, feeding troughs, &c., is carried out under the supervision of Inspectors of the Medical Officer of Health.

The following table gives the number of examinations made and animals affected, &c. :—

Number of Animals and Carcases examined.	Affected.	Died or Slaughtered.	Recovered.
605	148	42	106

ANTHRAX.

There were thirteen cases of anthrax in animals reported during the year. In twelve of the cases the carcases were found in cowsheds, and one in a slaughterhouse. In this latter case the owner was fined £5 and £1 16s. 6d. costs for exposing the carcase for sale.

A portion of the carcase was in each case submitted to Professor Sir Rubert Boyce, who certified that the animals from which they were taken were affected with anthrax.

The cowsheds where cases occurred were immediately cleansed and disinfected, all the manure burned, and samples of foodstuffs were in each case submitted for bacteriological examination, with the result that no Anthrax bacilli were found present.

SWINE FEVER ORDER.

With a view to facilitate the trade in the import of pigs from Ireland, and in order to fulfil the obligations of the Board of Agriculture, certain premises have been scheduled by the Health Committee to which pigs may be licensed, viz. :—

Stanley Cattle Market; pens at South end of the East side of the Nelson Dock; pens at East side of the Collingwood Dock; pens at South-west side of the Collingwood Dock; pens at South end of Prince's Pierhead.

The exigencies of the import trade appear to be met by this arrangement, the pigs being re-licensed after sorting at the places named. Objection to the arrangement was raised on the grounds that these premises were used for market purposes. An investigation was made into the matter, but it was found desirable, on the whole, that the arrangement should continue.

PIGGERIES.

There were 15 applications made during the year for licenses to keep pigs, of which 10 were transfers. Of the remaining five which were new applications involving 33 pigs, four were granted and one refused. Three hundred and four visits were paid to piggeries during the year.

RABIES.

In conformity with the requirements of the Board of Agriculture, reports were sent to the Board in respect of two suspected cases of rabies. Bacteriological examination was made in both the cases, and *post mortem* examinations were made by the Veterinary Inspectors. There were no signs that either of the animals had been affected with rabies.

DAIRIES, COWSHEDS AND MILKSHOPS

There is no change in the method of procedure respecting the licensing of cowsheds and the registration of dairies, milkshops and milkstores.

STATISTICS RESPECTING COWSHEDS.

	1909.
Number of applications to keep cows on premises not previously licensed	2
,, ,, granted	2
,, cows applied for on above applications	21
,, ,, granted	21
,, applications for transfer to fresh tenants of cowsheds previously licensed	43
,, ,, granted	43
,, ,, to keep more cows than the number for which the license was originally granted	3
,, ,, granted	3
,, additional cows applied for	11
,, ,, granted	11
,, Cowsheds on the register 31st December, 1908 ...	466
,, ,, ,, ,, ,, 1909 ...	466
Number of cows licensed to be kept within the city area	6,778

COWSHED INSPECTION.

	1908.	1909.
Number of Inspections of Cowsheds	4,042	4,190
,, found Incorrect	100	88
,, of Informations	3	4
,, Fined	3	4
Amount of Fines and Costs	£7 8 6	£0 12 6

Ninety-six notices have been issued to occupiers directing their attention to contraventions of the regulations.

Number of cowsheds in the city during the years 1900 to 1909 inclusive, together with the number of cows licensed to be kept, and the number of applications for new cowsheds:—

Years.	Cowsheds.	Cows.	Applications.	
1900 ...	437 ...	5,905 ...	5	
1901 ...	443 ...	5,909 ...	6	
1902 ...	442 ...	6,068 ...	16	Incorporation of Garston
1903 ...	447 ...	6,214 ...	12	
1904 ...	449 ...	6,359 ...	7	
1905 ...	456 ...	6,426 ...	17	Incorporation of Fazakerley
1906 ...	466 ...	6,666 ...	7	
1907 ...	462 ...	6,734 ...	11	
1908 ...	466 ...	6,768 ...	3	
1909 ...	466 ...	6,778 ...	2	

MILKSHOPS.

	1909.
Number of Applications for registration	*151
,, ,, granted	150
,, ,, withdrawn	1
Number of Milkshops on the register at the end of 1905	789
,, ,, ,, ,, 1906	826
,, ,, ,, ,, 1907	846
,, ,, ,, ,, 1908	814
,, ,, ,, ,, 1909	834

DAIRIES AND MILKSHOPS INSPECTION.

	1908.	1909.
Number of Inspections of Dairies and Milkshops	7,083	7,421
,, found incorrect	59	121
,, of Informations	10	8
,, Fined	10	7
,, Dismissed	—	1
Amount of Fines and Costs	£16 11 6	£8 1 6

Eighty-eight caution notices have been issued to occupiers of milkshops, and twenty notices were sent to farmers for contraventions of the Regulations.

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* One hundred and thirteen of these applications were transfers.

LEAVELOOKERS' VISITS TO COWSHEDS FOR THE PURPOSE OF EXAMINING COWS.

No. of Visits.	No. of Examinations of Cows.	No. found Healthy.	No. found ill.	No. referred to the Veterinary Surgeon.
1,674	21,165	20,977	188	188

ICE CREAM MAKERS AND VENDORS.

The usual inspections have been made of the premises utilised by the street traders solely for manufacturing ice cream.

The dwellings which these street traders occupy have also been kept under observation, and in no instance during the past year has it been found that ice cream has been made or stored in or about these dwellings.

A systematic inspection has also been made of shopkeepers' premises which are used for the manufacture and sale of ice cream.

	1908.	1909.
Number of premises under Inspection	850	897
,, visits made	2,344	2,668
,, caution notices issued	24	20
,, Informations	1	—
,, Fined	1	—
Amount of Fines and Costs	£0 9 6	£0 0 0

TUBERCULOSIS AND THE MILK SUPPLY.

LIVERPOOL CORPORATION ACT, 1900.

The number of actual or suspected cases of tuberculosis in cattle again shows a very considerable diminution on previous years, thus bearing out the fact that by a thorough examination and constant supervision the ravages of this disease amongst cattle may be successfully combated.

The examination of cows and cowsheds within the city has been duly carried out throughout the year, and all cases of sickness amongst the cattle are reported by the Leave-lookers. In cases where the cows are reported to be suffering from any disease of the udder, or any other disease likely to be inimical to the public health, the Medical Officer of Health directs that the animal be submitted to Veterinary examination and reported upon. Should clinical symptoms of tuberculosis of the udder be in evidence, the cow is either removed from the cowshed for slaughter or kept strictly isolated pending a definite conclusion of the case.

The following is a table showing the number of visits which it was necessary for the Veterinary Inspectors to make to cowsheds within the city boundary.

Year.	No. of Visits to Town Cowsheds.	No. of Cases notified by Owners.	No notice given.	No. of Cows examined.	No. of Cows not affected.	No. of Cows Suspicious of Tuber-culosis of the Udder.	No. of Convictions for Offences under the Act.
1901	40	—	—	59	32	27	—
1902	12	—	—	13	7	6	1
1903	61	27	34	121	97	24	7
1904	305	168	137	665	595	70	12
1905	239	176	63	298	241	57	1
1906	198	172	26	225	211	14	—
1907	188	137	51	238	235	3	—
1908	171	121	50	255	252	3	—
1909	177	114	63	203	200	3	—
Totals..	1391	915	424	2077	1870	207	21

MILK SUPPLIED FROM OUTSIDE THE CITY BOUNDARIES.

Under the Liverpool Corporation Act, 1900, Inspectors systematically visit various places supplied with milk from the country, including the railway stations and hospitals, and there take samples. These samples are then submitted to bacteriological examination. Should they be found to contain tubercle bacilli (the germs of consumption), the Veterinary Superintendent or his Assistant, accompanied by the Medical Officer of Health or his representative, and furnished with an Order signed by a magistrate resident within the county from which the milk is consigned (as prescribed by the Act), visits the farm or dairy and examines the stock therein. The cowsheds from which the affected and other supplies have been derived during the last nine years are situated in the counties included in the following tables:—

NUMBER OF FARMS FROM WHICH MILK WAS FOUND TO BE AFFECTED WITH TUBERCLE.

Year.	Cheshire.	Shropshire.	Denbighshire.	Lancashire.	Flintshire.	Staffordshire.	Derbyshire.
	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.
1901...	10	1	1	—	—	—	—
1902...	11	2	2	—	1	1	—
1903...	7	3	1	1	—	—	—
1904...	7	6	1	—	1	1	1
1905...	7	—	1	1	—	—	—
1906...	7	2	2	2	1	—	—
1907...	6	1	2	—	—	1	—
1908...	2	1	1	1	—	—	—
1909...	4	2	—	—	—	—	—
Totals	61	18	11	5	3	3	1

TABLE SHOWING THE VARIOUS COUNTIES FROM WHICH MILK HAS BEEN SENT INTO THE CITY FROM JANUARY, 1901, TO DECEMBER, 1909, TOGETHER WITH OTHER STATISTICAL DETAILS OF WORK DONE UNDER THE LIVERPOOL CORPORATION ACT, 1900.

A—Samples direct from suspected Cows.
B—Samples of mixed Milk taken at various places within the City.
C—Combined Totals.

Year.	Cheshire.						Shropshire.						Denbighshire.						Lancashire.						Flintshire.						Staffordshire.						Yorkshire.						Other Counties.					
	Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1901.....	10	206	216	2	13	15	3	42	45	—	2	2	2	6	8	—	2	2	—	29	29	—	—	—	—	10	10	—	1	1	—	2	2	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—
1902.....	18	247	265	2	13	15	4	52	56	—	5	5	6	14	20	3	5	8	—	27	27	—	—	—	1	6	7	1	—	1	1	4	5	—	3	3	—	2	2	—	—	—	—	—	—	—	—	—
1903.....	4	194	198	1	10	11	3	60	63	—	6	6	—	23	23	—	1	1	1	44	45	—	1	1	—	11	11	—	—	—	—	10	10	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—
1904.....	5	203	208	1	12	13	6	58	64	1	9	10	3	27	30	2	8	10	—	27	27	—	—	—	—	25	25	—	1	1	—	2	2	—	2	2	—	2	2	—	—	—	2	10	12	—	1	1
1905.....	10	205	215	1	8	9	—	44	44	—	—	—	—	44	44	—	3	3	—	31	31	—	2	2	—	6	6	—	—	—	—	3	3	—	—	—	—	3	3	—	—	—	—	2	2	—	—	—
1906.....	4	165	169	1	12	13	3	47	50	—	4	4	3	28	31	—	1	1	2	34	36	—	2	2	2	16	18	—	1	1	—	1	1	—	1	1	—	6	6	—	—	—	—	10	10	—	—	—
1907.....	4	142	146	1	7	8	—	39	39	—	—	—	—	20	20	1	4	5	—	21	21	—	—	—	—	16	16	—	1	1	—	4	4	—	—	—	—	2	2	—	—	—	—	9	9	—	—	—
1908.....	3	203	206	1	4	5	1	48	49	—	4	4	1	5	6	—	—	—	—	2	2	—	1	1	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	—	—	—
1909.....	5	213	218	1	5	6	3	48	51	3	1	4	—	37	37	—	—	—	—	15	15	—	—	—	—	10	10	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—	7	7	—	—	—
Totals ...	63	1778	1841	11	84	95	23	438	461	4	31	35	15	204	219	6	24	30	3	230	233	—	6	6	3	103	106	1	4	5	1	26	27	—	6	6	—	18	18	—	—	—	2	47	49	—	1	1



The cows housed in the City cowsheds yield approximately 17,000 gallons per day; the daily consumption of milk amounts to 34,000 gallons, or about seven ounces per head per day of the population.

The quantity of milk sent into the City from the different counties included in the foregoing table also amounts to about 17,000 gallons per day: of this quantity upwards of 60 per cent. comes from Cheshire. It may be mentioned that over 100,000 cows are in milk within the county of Cheshire, which is the largest dairy district in the United Kingdom.

The country cowsheds generally are found to be much inferior (from a sanitary point of view) to those within the City of Liverpool, and although, owing to the passing of the Liverpool Act, they have been greatly improved, there are many which are in a most unsatisfactory condition. In a number of cases farmers have expressed their approval of the beneficial results of the inspections made by the Liverpool Authorities owing to the consequent improvements made in the premises by the landlords.

The cattle also are neither so good, nor are they kept in the same cleanly condition, as those of the city.

The accompanying photographs illustrate town and country cowsheds.

When tuberculosis of the udder is suspected the necessary proceedings are taken as prescribed by the Act. They are similar in principle to those adopted within the city. Samples of milk are also taken from suspected animals, and submitted to a further bacteriological test to verify the diagnosis of the case. In the meantime the animals are isolated, and the milk dealt with as in the city.

It is not possible in all cases to find evidence of disease of the udder in the herd, the explanation usually being that the animals have been sold during the time which elapses between the taking of the sample in Liverpool and the visit of the Corporation officials to the farm.

Affected animals are usually disposed of for slaughter, but, it is to be regretted they are occasionally found to have been sold as milking cows, and, as a natural consequence, upon going into other herds would be likely to further disseminate the disease.

The following table gives statistical details concerning visits to farms outside the city boundary:—

Year.	No. of Farms Visited.	No. of Re-Visits to Farms.	Total No. of Visits to Farms.	No. of Cowsheds Examined.	No. of Cows Examined.	No. of Cows Suspicious of Tuberculosis of the Udder	No. of Convictions for Offences under the Act.	No. of Orders Prohibiting the Sale of Contaminated Milk within the City.
1901	12	6	18	40	351	20	1	4
1902	17	5	22	66	760	18	3	3
1903	13	2	15	32	364	10	3	2
1904	17	1	18	39	604	19	1	5
1905	9	1	10	20	266	9	4	1
1906	14	—	14	25	391	10	6	1
1907	12	1	13	31	462	7	1	1
1908	11	1	12	31	568	5	3	1
1909	12	8	20	76	1153	6	—	—
Totals ...	117	25	142	360	4919	104	22	15

Local Authorities in Rural Districts are often negligent in regard to the supervision of cowsheds. In every district, Bye-laws should be made and enforced in accordance with the Parliamentary powers given with this object.

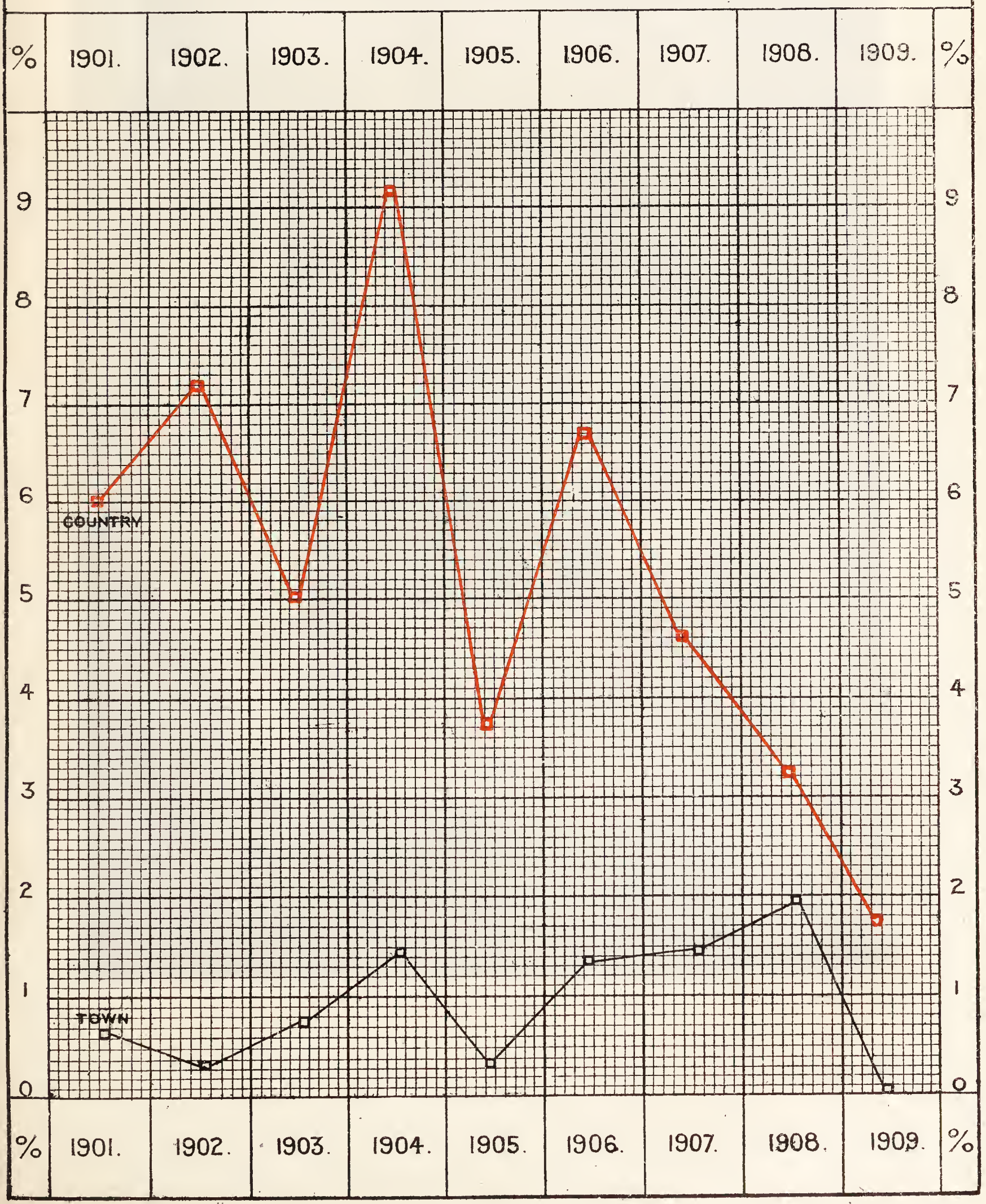
CITY OF LIVERPOOL.

Percentage of Samples of

TOWN (BLACK) & COUNTRY (RED) MILK

found to be TUBERCULAR

during each of the last NINE YEARS.



·885· 1500· 6/10· EST U



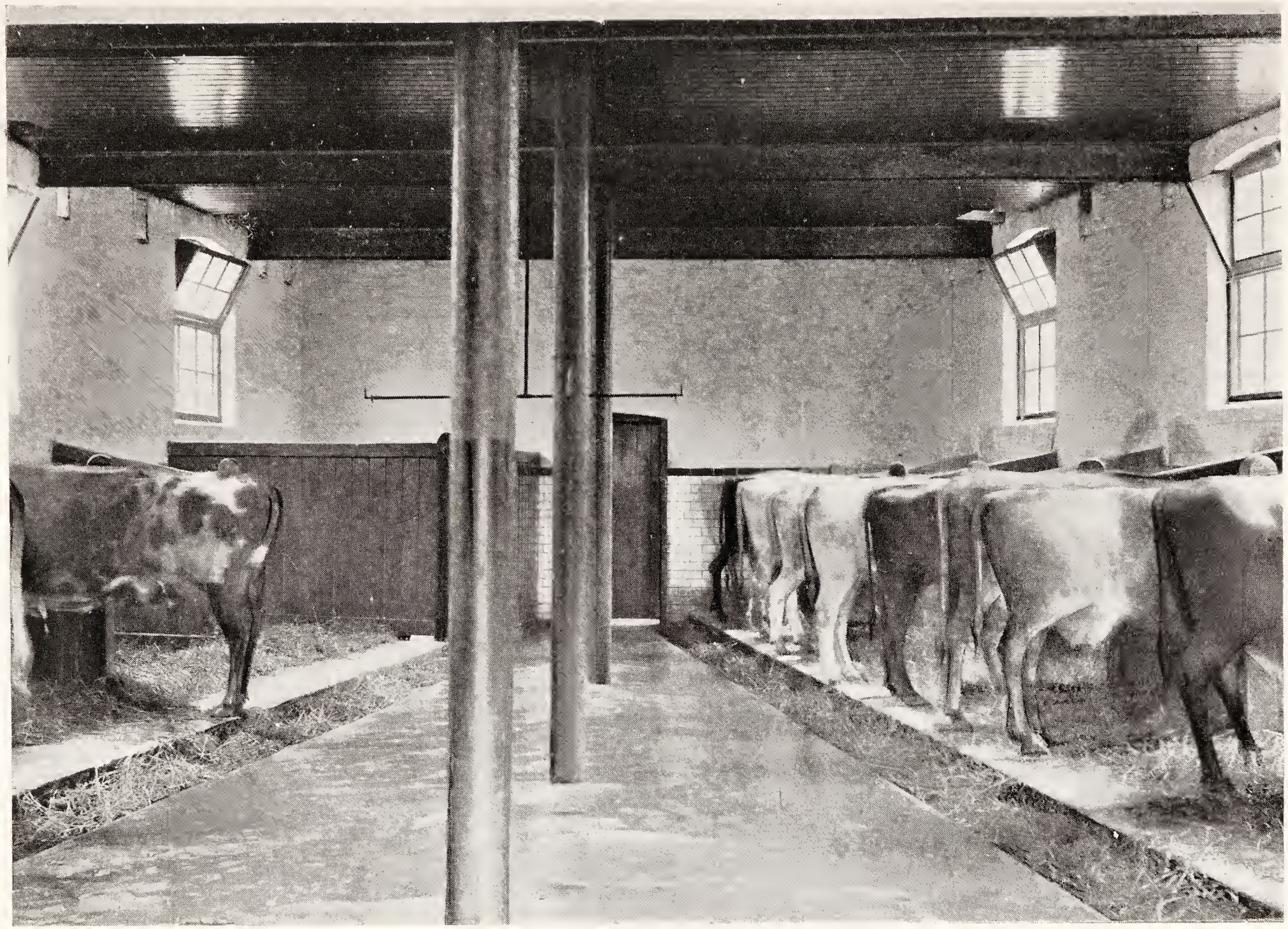
View of a badly lighted and drained Country Cowshed from which tubercular milk was sent to Liverpool.
Capacity for each cow = 380 cubic feet.

LIBRARY

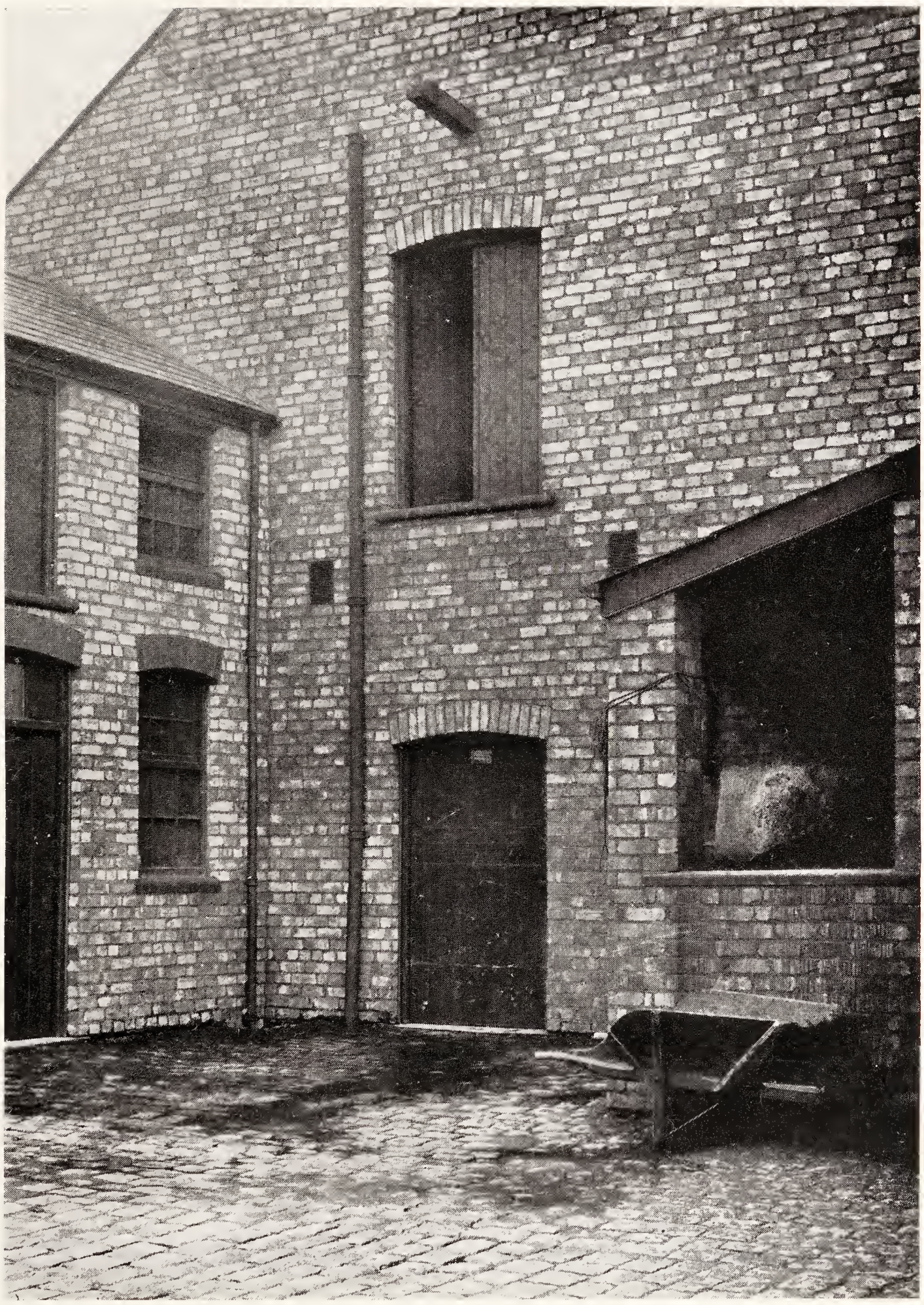


Another view at the same Farm, showing a large accumulation of manure, and defective condition of yard surface, with pools of liquid manure.

The lower window on the right hand opens into the Dairy.



INTERIOR VIEW OF A TOWN COWSHED.



EXTERIOR VIEW OF A TOWN COWSHED SHOWING MIDDENSTEAD.



Although the application of the Act involves a considerable amount of time and expense on the part of the Liverpool Corporation and its officials, the result is that the city is protected to a great extent from the evils which follow an impure milk supply. The Local Authorities of many surrounding districts have also become alive to the necessity of insisting upon better sanitation of farms and cowsheds, and the farmers themselves in many instances show a willingness to be advised as to the best methods to adopt to keep their cattle and cowsheds in the most healthy and sanitary condition.

MILK DEPÔTS.

The high rate of infant mortality attributable to improper feeding led to the establishment and continuation of depôts at which a preparation of pure cows' milk is made to resemble human milk as closely as possible. This preparation is intended for the use of infants whose mothers are unable to suckle them, and, but for it, would receive altogether unsuitable and deleterious food.

Great pains are taken to see that the milk is properly used; careful instructions are given, and the infants are visited either at their homes or are seen at the Depôts.

Since the initiation of the scheme in 1901, 16,131 infants have been fed upon humanised milk supplied either at the Milk Depôts or through dairies, the average age at the commencement of such feeding being three months and three-quarters; very few (953) were, from one cause or another, admitted after twelve months of age.

The expenditure and income of the Depôts since their establishment is shown on the appended table.

It may be well to repeat that among the most frequent causes which contribute to infant mortality are, as shown by the medical certificate, "atrophy," "diarrhœa," "diarrhœa and convulsions," and similar causes, all pointing to the fact that from some reason or another nutrition is interfered with, and that the infant is unable to live upon the food given it.

The loss of life is greatest in the summer and autumn months, and it was found as the result of careful personal observations, carried out by the Medical Officer of Health extending over several years and involving the circumstances of upwards of one thousand deaths of infants, taken consecutively, that amongst infants below three months of age, either wholly or partially fed during this season on artificial foods, the deaths are fifteen times as great as they are amongst an equal number of infants fed upon breast milk, in other words out of every 1,000 infants under three months of age, naturally fed upon breast milk alone, 20 died of autumnal choleraic disease; but of the same number of infants at the same age, artificially fed, then instead of 20 dying, as many as 300 died from this cause.

Similarly between 3 and 6 months, and 6 and 9 months of age, there was an immensely larger proportion of deaths amongst the artificially fed than amongst the breast fed, although this proportion diminished as the age increased. One of the most discouraging features was found to be the lamentable want of maternal care, or of intelligence, or of capability to follow instructions when they were given by the medical adviser.

The food given to the artificially-fed was almost invariably found to be unsuitable, stale, or even putrescent, and given from a dirty and foul-smelling, long-tubed feeding bottle.

As it is obvious that the staple food of artificially-fed infants must be cows' milk modified in some form or another, and whilst nothing is omitted which can lessen the dangers of contamination of the milk in its many vicissitudes on its way from the cow to the consumer, yet it is obvious that cows' milk requires many modifications to adapt it to the needs of infants. In order to meet these, Depôts have been established, to supply the infant, either through the mother, or direct, with the nearest approach to human milk.

The problem of finding a complete substitute for the milk of a healthy mother has not been solved, and probably never will be solved. As the infant grows there may no doubt be variation in the quality of mother's milk which specially adapt it to the infant's need, niceties in nature which cannot be approached artificially, but when artificial feeding becomes necessary, it is obviously important that the best possible substitute for mothers' milk should be available.

It is the polluted cows' milk and the unsuitable artificial foods which cause the mischief, and as it is impossible by Municipal administration to reach and deal with all the sources of pollution, the justification for the present undertaking arises. The Municipality has spared no efforts to ensure a pure milk-supply.

It cannot be too strongly emphasised that the milk is intended solely for the use of those infants whose mothers are unable to suckle them, or who can only partially suckle them. This fact is stamped upon every card of instructions and is brought into prominence at every opportunity. There must be no misunderstanding upon this point.

The first Liverpool effort was made at Netherfield Road, in the centre of a very populous district, where during the hot weather the deaths from diarrhœa were always very numerous. When ordering the plant for this depôt, the best was done to find some firm with experience in this class of work, but as no such firm existed a large part of the work was experimental, and had subsequently to be altered. Nevertheless, valuable service has been done by it.

Some two months after, the Cazneau Street Depôt was opened. This is about three-quarters of a mile from Netherfield Road, and is used merely as a distributing depôt.

The number of people anxious to obtain the milk had now increased so much that the Committee opened another depôt in the South end, in Earle Road, and also a distributing depôt in Park Road. Many of the difficulties encountered in the former attempt were avoided, and the work at Earle Road is carried out conveniently and expeditiously.

The sale and distribution of the milk from dairies was allowed partly on grounds of economy, and with the hope of interesting the trade in the undertaking. The advantage is that it saves the expense of opening shops and depôts in all parts of the town; but the disadvantages are that in the case of the dairies there is a likelihood that the bottles may be tampered with, or kept too long, and as a matter of fact the only complaints which have arisen have been in connection with milk supplied from the dairies.

The milk is supplied by contract from farms specially visited and certified, and samples of it are taken on delivery from time to time for chemical and bacteriological analysis. When it arrives at the depôt, as a routine practice, a sample is taken for the purpose of estimating the amount of fat by Gerber's test; a sample is also examined in the cream tube.

As to details, a mixture is prepared consisting of cows' milk, water, cream, salt, and sugar, in such quantities as to make the liquid practically the same as human milk; a sufficient amount for one feed for an infant of stated age is put into each bottle, and the bottle and contents are then sterilized.

The method of use is carefully explained verbally to the person having charge of the infant, and from time to time visits are paid to the home to see that the milk is being used intelligently and in a proper manner.

The recent reduction in the rate of infant mortality in the City depends upon many causes. It is not claimed that it is altogether brought about by the humanised milk. Some of the improvement must clearly be assigned to other causes; on the other hand, there are facts which show the part played by the milk.

The infants fed on sterilized milk have been supplied as follows:—

Netherfield Road	Depôt	2,795
Earle Road	Do.	2,160
Park Road	Do.	2,095
Cazneau Street	Do.	2,502
Boaler Street	Do.	400
Hornby Street	Do.	219
Total supplied from Depôts		10,171
,, supplied from Dairies		5,960
		16,131

Of the 10,171 infants supplied through the Depôts, and of whom accurate records are kept, there were 941 cases in which the infant died, but of these 75 had been fed on the milk for less than one week, or had been irregularly fed on it; 713 were ill, some of them hopelessly ill when the milk was first supplied. Each death formed the subject of a careful inquiry, and it was found that out of the total number of infants who died only 179 were fairly healthy at the time of admission, and had been properly fed since. In these 179 cases the registered causes of death were as follows:—

Convulsions	40
Diarrhœa	31
Bronchitis	18
Pneumonia	23
Wasting	5
Teething	8
Inflammation of Stomach	6
Whooping Cough	5
Blood Poisoning	1
Effect of operation on throat	2
Disease of Leg	1
Croup	1
Meningitis	3
Various other causes	35
	179

The following is the form adopted in making inquiries in cases in which infants using the milk have died :—

Humanised Milk Enquiries.

1.—Date of Death .....

2.—Name .....

Address .....

3.—Age .....

4.—Cause of Death .....

5.—Previous feeding and health .....

6.—Date or age at which Humanized Milk was first given, and where obtained.

.....

.....

7.—Length of time on Milk .....

8.—Was it given regularly, or with any addition? .....

9.—Did Milk suit the Child. If not, in what way did it disagree?

.....

10.—When was it discontinued? .....

11.—Duration of fatal illness .....

12.—Any complaints as to Milk .....

13.—Condition of House, &c. .....

Remarks:—

.....

.....

.....

.....

.....

Of those deaths attributed to diarrhœa or convulsions, in several cases the milk had been discontinued prior to the commencement of the fatal illness. Incidental circumstances in connection with one or two of the others may be quoted: In one instance the infant and another were the only survivors of a family of ten; in another, it was the sole survivor of a family of six; in another instance, in which death took place at one month of age, there had been within the preceding fortnight deaths of two other elder children in the same family; many delicate from birth, were tried with the milk as a last resort.

Out of the 10,171 infants coming promiscuously to the depôts, at varied ages and in conditions of health below the average, the mortality was 93 per 1,000, as against 150 per 1,000 for the whole City, and 85 to 106 for the best districts and 227 to 250 for the worst, for the five years 1905 to 1909.

But it must be remembered that in the rate for the whole City, and for the best and worst districts, are included also breast-fed infants; clearly if breast-fed infants were excluded and artificially-fed infants only taken into account, the rate of mortality amongst them would be enormously higher, and would show even more forcibly the advantages of the sterilized food, which, of course, is an artificial food, over other methods of artificial feeding.

The figures are very valuable, and are clearly and strongly in favour of persevering with the supply of this milk. But the figures are by no means the only evidences of the value of the milk; there is the evidence of parents, of medical men, and of personal observation, all strongly pointing to instances repeated over and over again in which to the use of the milk has been attributed the saving of the child's life. The question appears to narrow itself down to: What would these infants be fed on if they did not get this milk?

A study of the case books, in which the particulars of each case are entered, and in which the progress of the child, so far as can be ascertained is recorded, reveals many interesting facts. The first thing that strikes one is the very large number of children who are described as suffering from some form of sickness on admission; in fact, over 50 per cent. of those entered are stated by the mothers to be ill. A history that is frequently given is that almost everything in the way of infant's food has been tried without any satisfactory result, and they have come to the depôt as a last resource. A large number of these infants are recommended to try the milk by the medical attendants both in hospital practice and private practice, and they report excellent results in cases where it is used. The Committee are especially indebted to the members of the staff of the Children's Infirmary for their hearty co-operation and many valuable suggestions that they have made from time to time. The distributing depôts are made known at the out-patients' department of the Children's Infirmary, so as to bring the two institutions into closer contact with each other and to be a source of mutual assistance.

When the mother or the person in charge brings the infant with her, it is weighed.

If the child is not brought on the first visit, the milk is supplied on condition the mother brings it to be weighed at the earliest opportunity. The mother or guardian is told how to feed the child, and the card of instructions is explained to her. Every effort is made to induce the mothers to bring their children to be weighed at least once a fortnight. It is difficult, however, for some to do so, owing to the distance which they live from the depôt, and some are indifferent. A considerable number, however, take a keen interest in their children's progress, and bring them more or less regularly to be weighed.

Trouble is occasionally experienced with the very ignorant class, who still persist in decanting the milk out of the sterilized bottle into one with a long tube. For the purpose, therefore, of seeing that the milk is properly used, visits are paid from time to time to the houses where it is likely that the milk is misused. Also in cases where the mother says the child does not like the milk, or does not appear to be thriving on it, a visit is paid, and if a doctor is not in attendance the mother is advised to call one in.

Great difficulty is still experienced with regard to the cleansing of the bottles, owing to the fact that the customers cannot be prevailed upon to rinse them after use. As a result of this neglect, the bottles have on many occasions to be twice boiled and left for a week, or even longer, exposed to the air before being rendered fit for use.

The necessity for greater care in this direction is frequently urged on the customers served direct from the Depôts, and in some cases the bottles have to be sent back to the homes to be rinsed.

Most trouble arises in connection with the customers served through agents; these have been visited, and also communicated with by letter, and temporary improvement has been shown. It has, however, been found necessary to affix a label to each basket daily, so that the customers may be impressed with the necessity for greater care on their part.

The following are the regulations which control the sale of the milk:—

1. The Milk will be supplied in 9, 7 or 6 bottles in a basket, each bottle containing sufficient Milk for one feed, regulated according to the following ages:—

A	... ...	1 to 2 weeks.
B	... ...	2 to 8 ,,
C	... ...	2 to 3 months
D	... ...	3 to 5 ,,
E	... .	5 to 7 ,,
F	... .	7 to 8 ,,
G	... ...	over 8 ,,

o

2. Just before using, each bottle must be placed unopened in a basin or jug of hot water and warmed to the proper temperature. The bottle should then be opened and the teat inserted. After using, the bottle must be thoroughly rinsed in cold water, and the stopper must be left open. When all the milk in one bottle is not used, the remainder must not be warmed up again for the infant, but a fresh bottle opened for its next meal.

3. It is recommended that infants under 3 months old should be fed every 2 hours, from 3 to 5 months every $2\frac{1}{2}$ hours, and from 5 to 8 months every 3 hours; and that they be fed once or twice during the night. On no account must bread be given with the milk, which will be found quite sufficient if given regularly.

4. If the Milk is not agreeing with the child, the matter should be reported at once to the Superintendent, 52, Earle Road.

5. Every person using the Milk will be supplied with two teats, which must be kept clean and brought to the Depôt for inspection once a week. Extra teats will be charged for at the rate of 3d. each. Long tubing must not be used.

6. The person using the Milk must guarantee to continue its use regularly during the needs of the child, and to send for it at the stated hours.

7. The Milk must be kept in a cool place, and if children are sent for it they must be warned not to tamper with the stoppers of the bottles.

8. In order that the progress made may be ascertained, it is desirable that children using the Milk should be brought to the Depôt to be weighed, if possible, once a fortnight.

9. All bottles, stoppers, baskets and rubber rings not returned to the Depôt will be charged full value.

10. The cost of the full weekly supply of Humanised Milk for infants is 1s. 6d., payable in advance. If a day's supply only is taken, the charge is 3d.

Note.—The Depôts are open daily (Sundays and Bank Holidays excepted) from 11 a.m. till 6 p.m. Sundays and Bank Holidays, 11 a.m. to 1 p.m.

Depôts for the sale of Milk for the use of infants are situated at :—

251, Netherfield Road North.

52, Earle Road.

47, Cazneau Street.

37B, Park Road.

107, Boaler Street.

53A, Hornby Street.

Formula used for Modification of Milk.

Age.	Quantity of Pure Milk for Twenty-four Hours.	Water.
	Ounces.	Ounces.
One to two weeks	$4\frac{1}{2}$	$9\frac{1}{2}$
Two to eight weeks	$13\frac{1}{2}$	$13\frac{1}{2}$
Two to three months	$18\frac{3}{4}$	$12\frac{1}{4}$
Three to five months	30	15
Five to seven months	35	14
Seven to eight months	$36\frac{1}{2}$	$12\frac{1}{2}$
Eight months	$40\frac{3}{4}$	$10\frac{1}{4}$

A proportion of cream, $2\frac{1}{2}$ ounces of sugar, and $\frac{1}{6}$ ounce of salt, to be added to each gallon of mixture.

Staff employed at the various Depots,

The management of the Depôts is under the supervision of a Lady Superintendent, who was for some years on the Sanitary Staff.

Netherfield Road.

Staff—4 females, 2 boys.

Hours—8-30 a.m. to 6 p.m.
Sundays and Bank Holidays
8-30 a.m. to 1 p.m.

Apparatus consists of :—

Two Sterilizers—Jackson's 440 Bottles at one operation.
—"Wyvern," 405 ,, ,,

The sterilizers can be raised to a temperature of 210°, and are kept at this temperature between 20 minutes and half-an-hour.

Nine operations are performed daily, giving an available total of 3,785 bottles.

Earle Road.

Staff—6 females, 2 boys, and 1 man (Engineer).

Hours—8-30 a.m. to 6 p.m.
Sundays and Bank Holidays—
8-30 a.m. to 1 p.m.

One Sterilizer—Lister's, 960 bottles at one operation.

The temperature can be raised to 210°, and is kept at this temperature between 20 minutes and half-an-hour.

The salaries are as follows, viz. :—

Females	from 15/- to 32/6	per week.
Boys	,, 8/- to 10/6	,,
Engineer	30/-	,,

1909.

Customers on books, December 31st, 1908	517
Admitted January 1st, 1909, to December 31st, 1909	1,576
Total number of customers supplied	2,093
Supplied from Depôts	1,368
Supplied from Dairies	725
	2,093

Average age on admission during the year, $3\frac{3}{4}$ months.

The 1,576 customers admitted during the year have been supplied as follows:—

DEPOTS.	Under 12 Months.	Above 12 Months.	Adults and Children above 2 years.	Total.
52, Earle Road...	186	2	8	196
251, Netherfield Road	227	8	6	241
37b, Park Road	280	16	10	306
47, Cazneau Street	134	4	3	141
107, Boaler Street	103	10	2	115
53a, Hornby Street...	45	2	—	47
	975	42	29	1046
From Dairies	508	15	7	530
Total	1483	57	36	1576

Of the 1,540 children admitted during the year, 816 were ill or delicate on admission, many not being expected to live.

Of these 816, improvement in health was marked in 483, little or no improvement was shown in 168, 99 died, and 60 received the milk only casually or for too short a period to gauge the effect.

Total number of children under 12 months supplied during year:—

On books December 31st, 1908	431
Admitted during year 1909	1,483
	*1,914

* Including 372 fed by supplying the mothers with milk in cases where it was found that through lack of nourishment they were unable to nurse their infants.

Of these, 111 died, the cause of death being :—

Atrophy	10
Marasmus	37
Convulsions	28
Diarrhœa	4
Bronchitis	7
Pneumonia	9
Consumption and Inflammation of Bowels	1
Measles	1
Whooping Cough	2
Dentition	5
Various other causes	7
	111

Only 20 of these infants could be regarded as healthy on admission; 91 were ill on admission, and of these, 4 received the milk irregularly.

Total number of children over 12 months supplied during the year :—

On books December 31st, 1908	70
Admitted during year 1909	57
	127

14 of these children died from the following causes, 11 being very ill on admission :—

Convulsions	4
Marasmus	3
Bronchitis	2
Pneumonia	1
Measles	3
Phthisis	1
	14

Number of customers discharged during year 1909	1,569
Reasons for discontinuing:—	
In a satisfactory condition, milk no longer needed	1,005
Milk said not to agree	142
Children ill—Doctor ordered change of food	127
Children dead	125
One basket only supplied to	47
Removed into Hospitals or Workhouse	72
No reason obtainable for discontinuing	31
Cases in which breast milk proved insufficient in spite of supply for mother	20
Total	1,569

Of the 1,005 discharged in a satisfactory condition, 463 were of an age to take more general food; 70 children progressed well, but left the town; 280 were cases in which, owing to the milk provided for the mother, the natural supply proved sufficient and breast feeding was continued.

In 63 cases the parents were irregular in their payments, and their circumstances not being such as to justify the provision of the milk free of charge the supply was discontinued.

Thirty-three mothers obtained a few baskets to supplement the natural supply, which was then found to be sufficient.

Of the 142 infants with whom the milk was said not to agree, 110 (78 per cent.) were ill or very delicate on admission; in many cases various other foods had been unsuccessfully tried before sterilised milk was used.

Of the 127 discharged ill, 108 (85 per cent.) were suffering from illness or were delicate on admission.

Of the 125 who died, 102 (82 per cent.) were ill or delicate on admission, in many cases beyond the hope of recovery.

Expenditure and Income for years 1901 to 1909.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wages and Clothing	277 11 9	856 4 3	1,093 9 9	1,112 4 7	1,102 2 1	1,091 12 0	1,122 13 7	1,155 9 5	1,263 15 2
Rents	79 5 6	141 18 1	128 4 1	143 9 2	151 16 3	170 2 3	176 8 3	164 0 1	178 5 0
Rates and Taxes	20 13 4	46 15 6	65 9 0	55 19 5	63 19 11	64 17 8	64 13 1	68 8 10	67 11 1
Water Rent	39 10 4	100 17 7	79 16 6	66 16 4	84 0 11	67 11 5	62 0 5	65 17 9	74 2 2
Lighting	3 12 0	18 6 10	30 8 7	33 2 4	31 4 11	27 6 6	33 2 8	34 7 5	41 6 0
Fuel	1 19 0	6 2 4	19 11 1	14 1 5	14 18 10	6 17 11	4 13 7	5 16 3	3 8 8
Printing and Stationery	...	...	...	...	13 9 4	...	...	...	...
Advertising	7 3 6	12 18 9	12 13 6	14 1 6	21 7 6	34 16 8	35 17 9	36 8 8	43 6 5
Disbursements	3 10 0	10 10 0	29 0 10	14 0 0	...	17 0 0	20 7 6	29 10 6	31 10 10
Cleaning Premises, Windows, &c.	2 16 2	—	27 12 4	...	...	...	...	...	...
Travelling and Inspection Expenses	303 19 10	1,427 2 10	1,604 12 1	1,527 13 8	1,449 11 1	1,148 6 11	1,198 16 6	1,230 8 2	1,714 11 6
Stores (Milk, &c.)	3 8 0	6 16 0	13 16 10	13 12 0	13 12 0	13 12 0	13 12 0	13 12 0	14 2 0
Telephone Rent	333 8 3	84 16 5	9 9 11	7 7 6	43 15 8	15 13 10	24 2 8	36 17 6	...
Furniture, Fittings & Repairs	215 18 1	673 14 1	120 0 10	42 11 5	6 5 10	9 2 1	5 7 0	3 4 10	48 7 0
Machinery	425 19 0	459 16 8	645 9 0	255 9 1	351 1 9	252 6 8	266 15 2	265 10 6	295 9 4
Bottles, Stoppers, &c.	275 12 0	278 8 5	74 0 10	29 16 5	43 6 4	41 3 8	22 14 4	21 0 10	46 10 7
Building Repairs, Alterations, &c.	5 12 0	179 16 0	267 13 3	300 6 11	238 3 5	242 7 3	263 2 5	250 9 2	252 8 8
Horsing Vans, and Hire of Float	...	27 16 7	10 5 9	...	...	...	...	...	...
Electric Light Installation	...	2 18 7	2 9 3	2 16 3	2 16 3	2 16 3	2 16 3	2 11 0	2 11 0
Insurance	...								
Medical Attendance—Scalding Case	...	...	25 0 0	0 10 6	...	...	...	...	...
	1,999 18 9	4,334 18 11	4,259 3 5	3,633 18 6	3,631 12 1	3,205 13 1	3,317 3 2	3,383 12 11	4 077 5 5
Sale of Milk	518 0 2	1,534 13 7	2,230 11 1	1,676 0 6	1,644 7 9	1,250 5 7	1,196 16 7	1,154 13 4	1,328 13 3

SALE OF FOOD AND DRUGS ACT.

The Sale of Food and Drugs Act, and its various amendments, are designed to safeguard the honest trader from fraudulent competition, and to safeguard the public from fraud, imposition and danger, in regard to food and drugs.

The addition to food or drugs, of ingredients, or of colouring matter injurious in themselves, with a view to conceal the inferior quality of the article, is dealt with, as also the offence of adding materials, in themselves harmless, but which fraudently increase the bulk or lower the quality of the article sold. The main object of the Act is expressed in Section 6 of the original Act, which is as follows:—

> "No person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser. . . ."

Most of the routine action taken in regard to the analysis of food and drugs is to prevent infringements of this clause.

It is obvious that some amongst the many articles used for food are of very much greater consequence than others, not necessarily because greater quantities of them are consumed, but because they are peculiarly liable either to adulteration or contamination. Milk, for example, constitutes the chief and perhaps the only food for very large numbers of infants, and of sick persons; it is not unreasonable, therefore, that exceptional attention should be given to it. Further reference to milk analyses will be found on pages 206, 210, 212 and 219-222.

Great care is necessary in procuring samples, and in submitting them for analysis, or very misleading results will ensue. All samples of food or drugs are taken either by, or under the superintendence of, Inspectors of the Health Department. It is of the greatest consequence that trained and practised persons should be employed for this purpose. It is necessary from time to time to employ women or young people as agents, to go into the shop to ask for the articles, and as soon as the agent receives them, the Inspector enters the shop and completes the formalities which the Act requires.

Only a few purchases are made of those articles which are not likely to be adulterated, and which, experience shows, when they are taken for analysis, are almost invariably found to be genuine. On the other hand, when enterprising firms, seeking new fields for adulteration and profit, place suspicious articles on the market, it becomes necessary, sometimes, to take a considerable number of the articles before the fraud can be detected and checked.

Any member of the public is entitled, under the Act, to have samples analysed upon payment to the analyst of a fee of 10s. 6d.

Summary of Samples submitted for Analysis from January 1st, 1909, to December 31st, 1909, and other Statistical Details.

A. Refers to samples which were found to be adulterated or below statutory limits to a material extent.

B. Refers to trivial or doubtful cases.

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Infor-mation.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
—	—	—	—	Ammoniated Tincture of Quinine... ...	2	—	1	1	—	1
6	6	—	—	Anchovies	—	—	—	—	—	—
2	2	—	—	Apples	—	—	—	—	—	—
—	—	—	—	Arrowroot	7	7	—	—	—	—
—	—	—	—	Baking Powder	15	15	—	—	—	—
—	—	—	—	Barley	11	11	—	—	—	—
15	15	—	—	Beer and Stout	101	101	—	—	—	—
—	—	—	—	Bi-carbonate of Soda	3	3	—	—	—	—
—	—	—	—	Boracic Ointment	1	1	—	—	—	—
1	1	—	—	Brandy	7	6	—	1	—	—
—	—	—	—	Brawn	2	—	—	2	—	—
18	18	—	—	Bread	—	—	—	—	—	—

284	275	9	—	Butter	37	30	7	—	1	6
—	—	—	—	Buttermilk	2	—	—	2	—	—
—	—	—	—	Camphorated Oil	2	2	—	—	—	—
1	1	—	—	Castor Oil	—	—	—	—	—	—
—	—	—	—	Cayenne Pepper	5	5	—	—	—	—
1	1	—	—	Cheese	15	15	—	—	—	—
5	2	—	3	Cider	1	—	—	1	—	—
—	—	—	—	Cinnamon	2	2	—	—	—	—
—	—	—	—	Cocoa	29	29	—	—	—	—
6	6	—	—	Cod Liver Oil	3	2	1	—	—	3
3	3	—	—	Coffee	36	34	2	—	—	1
—	—	—	—	Coffee and Chicory	10	10	—	—	—	—
1	1	—	—	Compound Liquorice Powder	3	3	—	—	—	—
5	5	—	—	Condensed Milk	8	8	—	—	—	—
33	32	—	1	Confectionery	17	17	—	—	—	—
—	—	—	—	Coriander	1	1	—	—	—	—
—	—	—	—	Cornflour	5	5	—	—	—	—

SUMMARY OF SAMPLES, &c.—*Continued.*

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
3	—	1	2	Cream	31	22	3	6	2	2
—	—	—	—	Cream of Tartar	5	5	—	—	—	—
—	—	—	—	Currie Powder	1	1	—	—	—	—
1	1	—	—	Dried Fish	—	—	—	—	—	—
4	4	—	—	Dried Milk	—	—	—	—	—	—
—	—	—	—	Epsom Salts	1	1	—	—	—	—
3	3	—	—	Flavouring Essences	—	—	—	—	—	—
22	22	—	—	Flour	2	2	—	—	—	—
10	10	—	—	Flour, Self-raising	2	2	—	—	—	—
—	—	—	—	German Sausage	1	1	—	—	—	—
2	1	1	—	Gin	10	10	—	—	—	—
—	—	—	—	Ginger	19	19	—	—	—	—
3	3	—	—	Glycerine	—	—	—	—	—	—

1	1	—	—	Grape Juice	—	—	—	—	—	—
—	—	—	—	Gravy Salt	1	1	—	—	—	—
—	—	—	—	Ground Almonds	3	3	—	—	—	—
—	—	—	—	Ground Mace	8	7	1	—	—	1
—	—	—	—	Ground Nutmegs	1	1	—	—	—	—
—	—	—	—	Ground Rice	1	1	—	—	—	—
3	3	—	—	Honey	—	—	—	—	—	—
2	2	—	—	Horseradish	—	—	—	—	—	—
6	6	—	—	Ice Cream	—	—	—	—	—	—
3	3	—	—	Jam, Marmalade and Jelly	35	30	1	4	1	—
10	6	4	—	Lard	20	20	—	—	—	—
4	2	2	—	Lard Compound	1	1	—	—	—	—
—	—	—	—	Lard Refiner	1	1	—	—	—	—
2	2	—	—	Malt Extract	—	—	—	—	—	—
1	1	—	—	Mango Chutney	—	—	—	—	—	—
9	9	—	—	Margarine	30	29	1	—	—	1
17	17	—	—	Margarine Fats	—	—	—	—	—	—

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
7	7	—	—	Meat Extract	—	—	—	—	—	—
1	1	—	—	Meat Pie	—	—	—	—	—	—
6	4	—	2	Medical Prescription	—	—	—	—	—	—
76	72	2	2	Milk	853	729	67	57	24	44
2	1	1	—	Mist. Sennæ Co.	—	—	—	—	—	—
—	—	—	—	Mixed Spice	17	17	—	—	—	—
—	—	—	—	Mustard	4	4	—	—	—	—
3	3	—	—	Olive Oil	1	1	—	—	—	—
1	—	—	1	Palm Butter	—	—	—	—	—	—
—	—	—	—	Pepper	25	25	—	—	—	—
23	23	—	—	Pickles and Sauce	—	—	—	—	—	—
—	—	—	—	Potted Lobster	3	3	—	—	—	—
—	—	—	—	Potted Shrimps	3	—	1	2	—	—

55	53	2	—	Preserved Fruit and Vegetables	—	—	—	—	—	—
10	8	1	1	Proprietary Food	2	1	—	1	—	—
—	—	—	—	Rice	15	15	—	—	—	—
2	2	—	—	Rum	18	17	1	—	—	—
—	—	—	—	Sago	1	—	—	1	1	—
—	—	—	—	Sausage	4	4	—	—	—	—
1	—	—	1	Shea Butter	—	—	—	—	—	—
3	2	1	—	Shrimps	—	—	—	—	—	—
1	—	—	1	Seidlitz Powders	3	2	—	1	—	—
2	—	—	2	Sugar	2	2	—	—	—	—
9	9	—	—	Syrup and Treacle	3	3	—	—	—	—
—	—	—	—	Tapioca	2	2	—	—	—	—
—	—	—	—	Tartaric Acid	6	6	—	—	—	—
5	5	—	—	Tea	28	28	—	—	—	—
—	—	—	—	Temperance Beverages	30	17	—	13	—	—
1	1	—	—	Tinned Herrings and Tomato Sauce ...	—	—	—	—	—	—
4	4	—	—	Tinned Lobster	—	—	—	—	—	—

SUMMARY OF SAMPLES, &c.—*Continued.*

Informal Samples.				Nature of Sample.	Formal Samples.					
Number taken.	Number genuine.	Adulterated. Schedule A.	Adulterated. Schedule B.		Number taken.	Number genuine.	Adulterated. Schedule A.	Adulterated. Schedule B.	Number caut'nd.	Infor-mation.
10	9	—	1	Tinned Meats	3	3	—	—	—	—
1	1	—	—	Tinned Prawns	—	—	—	—	—	—
14	14	—	—	Tinned Salmon	—	—	—	—	—	—
4	4	—	—	Tinned Sardines	—	—	—	—	—	—
2	1	—	1	Vegetable Extracts	—	—	—	—	—	—
2	2	—	—	Vinegar	10	8	1	1	—	—
2	2	—	—	Whiskey	34	33	1	—	—	—
6	6	—	—	Wines	25	25	—	—	—	—
—	—	—	—	Yeast	5	5	—	—	—	—
—	—	—	—	Zinc Ointment	3	3	—	—	—	—
738	696	24	18		1598	1417	88	93	29	60

2336 Samples were submitted for chemical analysis during the year 1909.

	1908.	1909.
Number of Informations for Adulterated Food and Drugs ...	96	56
,, ,, for giving a False Warranty ...	2	2
,, ,, obstructing Inspector	1	1
,, ,, for offences under Margarine Act ...	2	1
Total Number of Informations—Food and Drugs Acts ...	101	60
Number Fined	64	41
Withdrawn on payment of costs	26	15
Acquitted or Withdrawn without costs...	11	4
Amount of Fines and Costs	£238 13 0	£186 10 6

The amount of fines for offences under the Sale of Food and Drugs Acts have decreased during the past twelve months as compared with the preceding twelve months. The average amount imposed per conviction during the year is £3 2s. 2d., against £3 14s. 7d. for the previous year.

Summary of Samples in which legal proceedings were instituted during the year January 1st, 1909, to December 31st, 1909, together with result.

No. Informations.	Nature of Samples.	Nature of Offences.	Result of Legal Proceedings.				
			No. of Convictions.	No. withdrawn on paym'nt of costs.	No. dismiss'd and withdrawn without costs.	Fines.	Costs.
						£ s. d.	£ s. d.
21	Milk	Deficient in cream	11	9	1	18 11 0	16 11 0
5	,,	Deficient in Cream and adulterated with water	4	1	—	5 0 0	4 3 0
1	,,	Deficient in cream and adulterated with borates	1	—	—	3 0 0	1 2 0
2	,,	Deficient in cream and coloured with a yellow coal tar dye.	1	1	—	25 0 0	1 12 0
9	,,	Adulterated with water	9	—	—	26 0 0	9 2 0
3	Skimmed Milk	,,	3	—	—	2 10 0	2 11 0
2	,,	Adulterated with borates	2	—	—	2 10 0	1 14 0
1	Machine Skimmed Milk	Adulterated with water	—	—	1	—	—
2	Cream	Adulterated with borates	—	2	—	—	1 10 0
5	Butter	Adulterated with foreign fat	5	—	—	19 10 0	4 17 6
1	,,	Obstructing Inspector in the course of his duty	1	—	—	5 0 0	0 13 0

SUMMARY OF SAMPLES IN WHICH LEGAL PROCEEDINGS WERE INSTITUTED—*Continued.*

No. Informations.	Nature of Samples.	Nature of Offences.	Result of Legal Proceedings.				
			No. of Convictions.	No. withdrawn on paym'nt of costs.	No. dismiss'd and withdrawn without costs.	Fines.	Costs.
						£ s. d.	£ s. d.
1	Margarine	Containing over 10% butter fat	—	—	1	—	—
1	Cod Liver Oil	Adulterated with mineral oil.....	—	1	—	—	0 15 0
2	,, ...	For issuing a False Warranty	1	—	1	20 0 0	9 18 0
1	Coffee	Adulterated with Chicory	—	1	—	—	0 15 0
1	Ammoniated Tincture of Quinine.	Deficient in Ammonia and Quinine Sulphate	1	—	—	1 0 0	0 17 0
1	Ground Mace	Adulterated with 15% of wild mace	1	—	—	0 5 0	0 17 0
1	Scotch Whiskey	Adulterated with water to 8.5 degrees below statutory limit.	1	—	—	0 10 0	0 17 0
60			41	15	4	128 16 0	57 14 6

Details of Samples of Milk obtained for Chemical Analysis.

	1908.	1909.
Number of Samples purchased on Week-days in Town..	379	294
,, Informations	50	24
,, Samples taken at Railway Stations on Week-days...	193	249
,, Informations	5	3
,, Samples purchased on Sundays in Town ...	136	157
,, Informations	20	17
,, Samples taken at Railway Stations on Sundays	138	129
,, Informations	2	—
,, Samples taken at City Hospitals	40	75
,, Informations	2	—
,, Samples taken at Corporation Milk Depôts...	20	25
,, Informations	—	—

MARGARINE ACT.

	1908.	1909.
Number of Visits to Wholesale Dealers in Margarine ...	774	809
,, Visits to Shops	7098	7036
,, Informations	2	1
,, Fined	1	—
Amount of Fines and Costs ...	£4 6s. 0d.	Nil.

SPECIAL EXAMINATIONS.

The following samples were submitted during 1909 for special examination:—

Nature of Sample	No. of Samples.	Nature of Sample.	No. of Samples.
Cream Thickening	1	Milk Sediment	2
Dust	1	Refined Lard	1
Hog Fat	1	Sewage Effluent	1
Liquid Soap	1	Unrefined Lard	1
Lard Substitute	1	Water	28

FERTILISERS AND FEEDING STUFFS ACT, 1906.

On 1st January, 1907, a Fertilisers and Feeding Stuffs Act, which replaced the old Act of 1893, came into operation.

Under it the City Analyst was appointed official agricultural analyst, and the three inspectors under the Sale of Food and Drugs Act were appointed official samplers.

A certain remuneration was agreed to in respect of the work done under the Act.

The following table shows the number of samples procured during the year :—

Nature of Sample.	No. of Samples.	Nature of Sample.	No. of Samples.
Bran	1	Linseed Cake Meal	2
Cattle Meal	3	Oil Cake	2
Compound Feeding Meal...	1	Oil Cake Meal.....	2
Fertilizers	4	Wheat Meal	2
		Total.....	17

POISONS AND PHARMACY ACT, 1908.

The Poisons and Pharmacy Act, 1908, came into operation on the 1st April, 1909.

The object of the Act is to regulate the sale of certain poisonous substances, and to amend the Pharmacy Acts.

Amongst other things it is enacted that:—

(Section 2).—"So much of the Pharmacy Act, 1868, as makes it "an offence for any person to sell or keep open shop for the sale of "poisons, unless he is a duly registered pharmaceutical chemist or "chemist and druggist, and conforms to regulations made under "section 1 of that Act, shall not apply in the case of poisonous "substances to be used exclusively in agriculture or horticulture for "the destruction of insects, fungi, or bacteria, or as sheep dips or "weed killers which are poisonous by reason of their containing "arsenic, tobacco, or the alkaloids of tobacco, if the person so selling "or keeping upon shop is duly licensed for the purpose under this "section by a local authority, and conforms to any regulations as to "the keeping, transporting, and selling of poisons made under this "section, but nothing in this section shall exempt any person so "licensed from the requirements of any other provision of the "Pharmacy Act, 1868, or of the Arsenic Act, 1851, relating to "poisons"; and that His Majesty may by Order in Council make regulations as to:—

(*a*) the granting of licenses under this section; and

(*b*) the duration, renewal, revocation, suspension, extent, and production of such licences; and

(*c*) the keeping, inspection, and copying of registers of licences; and

(*d*) the fees to be charged for licences and for inspection and copying of registers; and

(*e*) the keeping, transporting, and selling of the poisonous substances to which this section applies;

and generally for the purpose of carrying this section into effect.

And whereas it is expedient that Regulations be made in pursuance of the said Act.

The following are the principal regulations referred to in the foregoing Order in Council, Poisons and Pharmacy Act, 1908:—

In granting licenses for the sale of poisonous substances for use exclusively in horticulture, preference shall be given to nurserymen, florists, seedsmen and other persons whose business is specially connected with horticulture.

A licence shall not authorise the licensee to sell or keep open shop for the sale of poisonous substances except from or on premises (to be specified in the licence) within the area of the local authority which granted it, and for the purpose of these regulations, a municipal borough the council of which is a local authority for those purposes, and in Scotland a police burgh, shall not be treated as forming part of any county.

Every local authority shall keep a register of the licences granted by them for the time being in force, and any person shall, at all reasonable times, upon payment of such reasonable fees as may be fixed by the local authority, be entitled to inspect and to make copies of, or take extracts from, the register.

All poisonous substances shall be kept in a separate drawer or closed receptacle apart from any other goods, and poisonous substances shall not be sold upon the same premises as articles of food for human consumption unless the Local Authority are satisfied that convenient arrangements for their sale cannot otherwise be made, and in that case they must be sold at a separate counter. For the purpose of this regulation a part of a counter which is shown to the

satisfaction of the Local Authority to be adequately separated from the rest of the counter shall be treated as a separate counter.

A poisonous substance shall not be sold except in an unclosed vessel or receptacle as received from the manufacturer, distinctly labelled with the name of the substance and the word "Poison," and with the name and address of the seller, and with a notice of the special purpose for which it has been prepared.

Liquid preparations shall be sold only in bottles, tins, drums, or casks of sufficient strength to bear the ordinary risk of transit without leakage. Each bottle, tin, drum, or cask shall have the word "Poisonous" indelibly printed, marked, or branded in easily legible characters in a conspicuous position apart from the label, and the label must bear the word "Poison." When sold in bottles the bottles shall be of a distinctive character so as to be easily distinguishable by touch from ordinary bottles.

Solid preparations shall be securely packed in such a manner as to avoid, so far as possible, the risk of breaking or leakage by transport, and the package shall have indelibly printed, marked, or branded in easily legible characters in a conspicuous position notice that it must not be used for any other purpose.

All premises from or on which a licensee is authorised to sell or keep open shop for the sale of poisonous substances shall at all reasonable times be open to inspection by officers appointed by a local authority.

During the year 15 licences were granted under this Act.

BACTERIOLOGICAL EXAMINATIONS AND ANALYSES.

The Bacteriological Analyses comprise:—

1. The Examination of food-stuffs of various kinds.

2. The daily and monthly examination of the water supplied to the City.

3. The examination of suspected cases of rabies, anthrax, tuberculosis, &c.

4. The examination of rats taken on shipboard and in the town for the presence or absence of plague.

5. The examination for diagnostic purposes in suspected cases of diphtheria, typhoid fever, sputum and suspected cases of plague.

The general bacteriological condition of foodstuffs and water is ascertained, comprising experiments for the determination of—

(*a*) The presence of organisms.

(*b*) The number of organisms.

(*c*) The kind of organism.

All samples undergo routine examination for the presence of specific organisms indicating dirt or sewage contamination (*Bacillus coli communis* and allied forms, *Bacillus enteritidis sporogenes* and allied forms).

In addition special experiments are conducted to determine the presence or absence of tubercle bacilli.

The total number of food-stuffs examined bacteriologically during 1909 was 1,216, a detailed list of which follows:—

SUMMARY OF FOOD-STUFFS.

Sample.	No.	Sample.	No.
Baked Beans	1	Meat Extract	2
Butter	33	,, Pies	31
Cheese	18	,, Potted	15
Cockles	20	,, Tinned	20
Cream	14	Mussels	43
Cream Cheese	5	Mineral Water	12
Condensed Milk	52	Oysters	35
Fish Paste	19	Pickles	5
,, Potted	7	Periwinkles	12
,, Tinned	57	Polony	9
Flour	10	Sauce	36
Fruits, Preserved	15	Sausage	13
Honey	1	Sewage	1
Ice	5	Soups	17
Ice Cream	6	Sterilized Milk	8
Jam	21	Syrup and Treacle	7
Jelly	24	Water	9
Lard Compound	3	Whelks	2
Lemon Cheese	8	Milks	600
Margarine	14		
Marmalade	6	Total	1,216

SUMMARY OF ALL EXAMINATIONS, 1909.

Examination of Foodstuffs	1,216
,, *Waters	912
,, Typhoid Specimens	224
,, Diphtheria ,, ...	49
,, Rats	2,366
,, Miscellaneous	132
Total	4,899

In addition to the above-mentioned, a very large number of bacteriological examinations were made during the year 1909 of suspected tubercular, typhoid and diphtheria cases for the Medical Practitioners of the City and surrounding districts, the total number of such examinations amounting to 1,530.

* These water examinations were specially carried out for the Water Committee of the City, and details of the analyses will be found in Water Engineer's Report for 1909.

MILK ANALYSES FOR THE YEAR.

600 milks were examined for the presence of—

1. The *Bacillus tuberculosis*.
2. The *Colon bacillus*.
3. The *Bacillus enteritidis sporogenes*, or allied forms.
4. Other bacteria.

The *Bacillus tuberculosis* indicates that the animals from which the milk was taken were tubercular, or that the pails into which the milk was received or the hands of the milker were infected from previous contact with a diseased cow or person.

The *Colon bacillus* indicates contamination with dirt of an intestinal origin, or that the cow was suffering from inflammation of the udder.

The *Bacillus enteritidis sporogenes* indicates dust or intestinal contamination.

The term "negative" indicates that the inoculated guinea pigs died before the test for tubercle had had time to be completed.

Presence of the Bacillus Tuberculosis.

Of the 600 samples examined for tubercle, 57 guinea-pigs died before the tubercle test was complete; 15 of the milk samples were not inoculated and are included under those returned negative, guinea-pigs at this particular period being extremely difficult to obtain.

Of the 528 remaining samples, 14 proved tubercular, of which 10 were railway-borne milks and 4 town samples.

It is a very serious matter that tubercle is so widespread in milk when it is remembered that one tubercular cow may be the means of infecting the milking utensils, the hands of the milker, and, in consequence, even the teats of the other healthy animals. Regulations dealing with infected animals cannot therefore be too stringent.

Table showing the number of samples of milk examined Bacteriologically for Tubercle Bacilli from 1896 to 31st December, 1909.

Year.	Total Number of Samples Taken.	Town Samples.		Country Samples.	
		No. taken.	Tubercular.	No. taken.	Tubercular.
1896	119	83	4	36	5
1897	150	63	4	87	5
1898	112	84	7	28	5
1899	352	167	1	185	15
1900	560	255	4	305	5
1901	566	254	2	312	20
1902	595	213	1	382	32
1903	582	231	2	351	19
1904	571	201	4	370	37
1905	560	212	1	348	14
1906	530	209	3	321	22
1907	451	194	4	257	14
1908	528	256	5	272	10
1909	600	259	4	341	10
Totals.....	6,277	2,681	46	3,595	213

Detailed Table shewing particulars of Samples of Milk for 1909.

\+ Signifies that Bacilli are present.
— Signifies that Bacilli are absent.

	RAILWAY.							TOWN.							HOSPITAL.							STERILIZED MILK DEPOT.							Total No. per M'th.	NEGATIVE.					TUBERCULAR.					
	No.	Colon Bacilli. c.c. 1	c.c. .1	c.c. .01	c.c. .001	B. Ent. Sporog.	Total.	No.	Colon Bacilli. c.c. 1	c.c. .1	c.c. .01	c.c. .001	B. Ent. Sporog.	Total.	No.	Colon Bacilli. c.c. 1	c.c. .1	c.c. .01	c.c. .001	B. Ent. Sporog.	Total.	No.	Colon Bacilli. c.c. 1	c.c. .1	c.c. .01	c.c. .001	B. Ent. Sporog.	Total.		Railway.	Town.	Hospital	Depot.	Total No.	Railway.	Town.	Hospital	Depot.	Total No.	
January.	— 1 11 5 4	— + + + +	— — + + +	— — — + +	— — — — +	— 21		12 4 4 3 2	— + + + +	— — + + +	— — — + +	— — — — +	— 25		— — — — 7	— — — — +	— — — — +	— — — — +	— — — — +	— 7		— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— —	53	13	3	2	—	18	1	1	—	—	2	January.
February.	2 1 9 — 10	— + + — +	— — + — +	— — — — +	— — — — +	+ in 5 sam- ples	22	12 2 — — 10	— + — — +	— + — — +	— — — — +	— — — — +	— 24		— 1 — 1 2	— + — + +	— — — + +	— — — + +	— — — — +	+ in 1 case	4	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— —	50	3	—	1	—	4	2	—	—	—	2	February.
March.	3 2 1 4 12	— + + + +	— — + + +	— — — + +	— — — — +	+ in 4 sam- ples	22	10 1 — — —	— + — — —	— — — — —	— — — — —	— — — — —	— 11		— — — — 7	— — — — +	— — — — +	— — — — +	— — — — +	+ in 2 cases	7	— — 2 2 3	— — + + +	— — + + +	— — — + +	— — — — +	— 7	47	6	—	—	3	9	1	—	—	—	1	March.
April.	— — — — 10	— — — — +	— — — — +	— — — — +	— — — — +	— 10		9 5 6 — —	— + + — —	— — + — —	— — — — —	— — — — —	— 20		— — — — 6	— — — — +	— — — — +	— — — — +	— — — — +	— 6		— — — — 4	— — — — +	— — — — +	— — — — +	— — — — +	— 4	40	4	2	1	—	7	—	—	—	—	—	April.
May.	— — — — 20	— — — — +	— — — — +	— — — — +	— — — — +	— 20		3 4 7 — 9	— + + — +	— — + — +	— — — — +	— — — — +	— 23		— — — — 8	— — — — +	— — — — +	— — — — +	— — — — +	+ in 2 cases	8	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— —	51	6	9	2	—	17	—	1	—	—	1	May.
June.	1 — — — 13	— — — — +	— — — — +	— — — — +	— — — — +	— 14		15 2 — — 11	— + — — +	— — — — +	— — — — +	— — — — +	— 28		— — — — 6	— — — — +	— — — — +	— — — — +	— — — — +	— 6		— — — — 4	— — — — +	— — — — +	— — — — +	— — — — +	— 4	52	1	6	—	—	7	—	—	—	—	—	June.
July.	— — — 4 16	— — — + +	— — — + +	— — — + +	— — — — +	— 20		20 1 — — 10	— + — — +	— — — — +	— — — — +	— — — — +	— 31		— — — — 6	— — — — +	— — — — +	— — — — +	— — — — +	— 6		— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— —	57	3	—	—	—	3	—	—	—	—	—	July.
August.	— — — — 20	— — — — +	— — — — +	— — — — +	— — — — +	— 20		— — — — 2	— — — — +	— — — — +	— — — — +	— — — — +	— 2		1 — — — 1	— — — — +	— — — — +	— — — — +	— — — — +	— 2		— — — — 1	— — — — +	— — — — +	— — — — +	— — — — +	— 1	25	—	1	—	—	1	—	2	—	—	2	August.
September.	— 2 3 2 11	— + + + +	— — + + +	— — — + +	— — — — +	— 20		— — 2 — 20	— — + — +	— — + — +	— — — — +	— — — — +	+ in 5 cases 22		— — — — 7	— — — — +	— — — — +	— — — — +	— — — — +	— 7		— — — — 4	— — — — +	— — — — +	— — — — +	— — — — +	— 4	53	3	—	—	—	3	—	—	—	—	—	September.
October.	— 3 1 1 22	— + + + +	— — + + +	— — — + +	— — — — +	+ in 1 Sam- ple.	27	6 10 4 2 8	— + + + +	— — — + +	— — — + +	— — — — +	— 30		— — — — 3	— — — — +	— — — — +	— — — — +	— — — — +	+ in 3 cases	3	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— —	60	2	—	2	—	4	2	—	—	—	2	October.
November.	— — 2 — 19	— — + — +	— — + — +	— — — — +	— — — — +	+ in 2 sam- ples	21	11 — — — 11	— — — — +	— — — — +	— — — — +	— — — — +	— 22		— — 1 — 10	— — + — +	— — + — +	— — — — +	— — — — +	— — 11		— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— —	54	—	—	—	—	—	1	—	—	—	1	November.
December.	2 4 4 1 10	— + + + +	— — + + +	— — — + +	— — — — +	— 21		10 4 — — 7	— + — — +	— — — — +	— — — — +	— — — — +	— 21		— — — — 8	— — — — +	— — — — +	— — — — +	— — — — +	— 8		— — — — 8	— — — — 1	— — — — +	— — — — +	— — — — +	— 8	58	—	—	—	—	—	2	—	1	—	3	December.
Ttl.							238							259							75							28	600	41	21	8	3	73	9	4	1		14	Ttl.

*NOTE. These figures include a number of Milks which were not inoculated owing to scarcity of guinea pigs.

TABLE SHOWING (A) SAMPLES OF MILK DRAWN DIRECT FROM SEPARATE COWS, (B) SAMPLES OF MIXED MILK, TOGETHER WITH OTHER PARTICULARS RELATING TO SAMPLES OF MILK TAKEN FOR BACTERIOLOGICAL EXAMINATION FROM JANUARY 1ST, 1901, TO DECEMBER 31ST, 1909.

YEAR.	TOWN.						COUNTRY.						Total number of Samples taken during the Year.
	Samples.			Tubercular.			Samples.			Tubercular.			
	A Direct fromCows, taken in routine practice.	B Mixed Milk from Town Cows.	Total.	A. Direct from Cows.	B Mixed Milk.	Total.	A Direct from Suspected Cows.	B Mixed Milk from Country Cows.	Total.	A Direct from Cows.	B Mixed Milk.	Total.	
1901	215	39	254	2	—	2	15	297	312	2	18	20	566
1902	180	33	213	1	—	1	30	352	382	6	26	32	595
1903	203	28	231	2	—	2	7	344	351	1	18	19	582
1904	163	38	201	2	2	4	16	354	370	4	33	37	571
1905	196	16	212	1	—	1	10	338	348	1	13	14	560
1906	143	66	209	3	—	3	14	307	321	1	21	22	530
1907	90	104	194	3	1	4	5	252	257	2	12	14	451
1908	141	115	256	1	4	5	5	267	272	1	9	10	528
1909	147	112	259	4	—	4	8	333	341	4	6	10	600
Totals.....	1478	551	2029	19	7	26	110	2844	2954	22	156	178	4983

Source.	No. of Samples.	The Colon Bacillus.										B. Enteritidis Sporogenes.			
		Absent in 1 c.c.		Present in 1 c.c. but Absent in ·1 c.c.		Present in ·1 c.c. but Absent in ·01 c.c.		Present in ·01 c.c. but Absent in ·001 c.c.		Present in ·001 c.c.		Absent.		Present.	
		Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.
Railway borne Milks	238	8	3·4	13	5·5	33	13·9	17	7·2	167	70	226	95	12	5
Town Milks	259	108	41·5	33	12·7	23	8·9	5	1·9	90	35	254	98	5	2
City Hospitals	75	1	1·3	1	1·3	1	1·3	1	1·3	71	94·8	66	88	9	12
Sterilized Milk Depôts	28	—	—	—	—	2	7·1	2	7·1	24	85·8	—	—	—	—

RESULTS OF ANALYSES OF BUTTER, CREAM, CONDENSED MILKS, CHEESE, MEAT PIES, TINNED FISH, TINNED MEATS and SHELL FISH.

Butter.—Thirty-three samples were analysed and the colon bacillus was present on six occasions, B. enteritidis sporogenes being absent.

Cream.—Fourteen samples were submitted, including four samples of "tinned cream," which proved to be sterile. Of the remaining ten samples, analysis showed the presence of the colon bacillus in each sample.

Condensed Milk.—Fifty-two samples were analysed, and in no case were they found to be sterile. The large numbers of bacteria which were present on several occasions proved an unsatisfactory feature in condensed milk; the milk which was originally condensed might have contained various products of the decomposition of bacteria. These products are subsequently masked by the large quantity of sugar present, but their irritant properties are not destroyed.

Cheese.—Eighteen samples altogether were examined, the colon bacillus being present in fourteen samples; B. enteritidis sporogenes was absent.

Meat Pies.—Thirty-one meat pies were submitted for analysis, the colon bacillus being present in ten of the samples examined.

Fish (Tinned).—Fifty-seven samples of fish (tinned) were analysed, and the majority were found to be sterile.

Fish Pastes.—Nineteen fish pastes were examined, and the results showed that seventeen samples were sterile.

Sausages.—Thirteen samples were analysed, all of which contained the colon bacillus; six samples also showed the persence of the B. enteritidis sporogenes.

Shell Fish.—Shell fish are eaten for the most part uncooked, and they are in consequence liable to convey infection, if they become contaminated with pathogenic bacteria. Contamination may occur in the transit and storing of the fish, but more especially in the collecting ground. Therefore, as in previous years, a series of samples were submitted to careful analysis, and evidence of contamination was found in most of the samples.

	Number examined.	Colon Bacillus in	B. enteritidis sporogenes in
Cockles	20	16	10
Oysters	35	30	23
Mussels	43	30	16
Periwinkles	12	12	11
Whelks	2	2	2

The total number of shell-fish being 112.

Ice Cream.—The results of the analyses of six samples of ice cream showed the extremely unsatisfactory conditions attaching to the manufacture of this article. All the samples contained the colon bacillus in ·001 c.c., and also B. enteritidis sporogenes in 10 c.c.

The total number of foodstuffs examined bacteriologically up to 1909 are as follows :—

1896	122
1897	162
1898	311
1899	505
1900	1,067
1901	1,055
1902	1,097
1903	1,061
1904	1,107
1905	1,147
1906	1,075
1907	1,028
1908	1,043
1909	1,216
	11,996

Plague Observations and Rats.—A careful watch has, as heretofore, been maintained over the rats in the ships entering the port, and over those found in the warehouses and in various parts of the town. By the systematic examination of these rats we may be put into a position to forestall cases of plague. No plague-infected rats were found.

The total number of rats examined during the years are:—

Town	597
Port	1,769
Total	2,366

City Hospitals.

During the year numerous specimens have been submitted for examination, and the following is a summary:—

Cases of Diphtheria	49
,, Typhoid	224
Miscellaneous	4
Total	277

DIPHTHERIA.

Positive	8	
Negative	6	
Suspicious	5	
Mixed growth (non-diphtheritic)	19	
Streptococci	6	
Staphylococci	5	
	——	49

TYPHOID.

Positive	89	
Negative	113	
Indefinite	22	
	——	224

MISCELLANEOUS.

Four miscellaneous specimens were also examined.

The following specimens were examined for Actinomycosis, Tubercle, etc.

Nature of Specimen.	Total Number.	Present in.	Absent in.
Tubercle—			
Glands	7	2	5
Udders	7	6	1
Mastitis—			
Udder	1	1	—
Actinomycosis—			
Ox Tongue	1	1	—
Total	16	10	6

ANTHRAX.

The following specimens were examined for Anthrax:—

Nature of Specimen.	Total Number.	B. Anthracis.	
		Present in.	Absent in.
Animal Material	3	—	3
Bone Siftings	1	—	1
Blood	1	1	—
Bran	1	—	1
Cake	2	—	2
Ears	23	8	15
Hay	17	—	17
Hide	3	—	3
Meal	25	—	25
Crushed Oats	1	—	1
Spleen	3	1	2
Straw	2	—	2
Wool	13	—	13
Total	95	10	85

RABIES.

Two dogs' heads were sent for examination, but in neither case was evidence of rabies found.

MISCELLANEOUS SAMPLES.

Nature of Sample.	Total Number.	Result of Examination.
Beef	4	All shewed specific growth of fungi.
Beef	1	No evidence of Blackleg.
Cow's Liver	1	Multilobular cirrhosis.
Veal	1	Extensive destruction of subcutaneous tissue—traumatic in origin.
Army Rations	1	Sterile.
Brine	3	Colon Bacilli and allied organisms absent in 50 c.c.
Salmon, Tinned	1	Sterile.
Tomatoes, Tinned	3	Two samples sterile; one not sterile.
Total	15	

SUMMARY OF SPECIAL EXAMINATIONS.

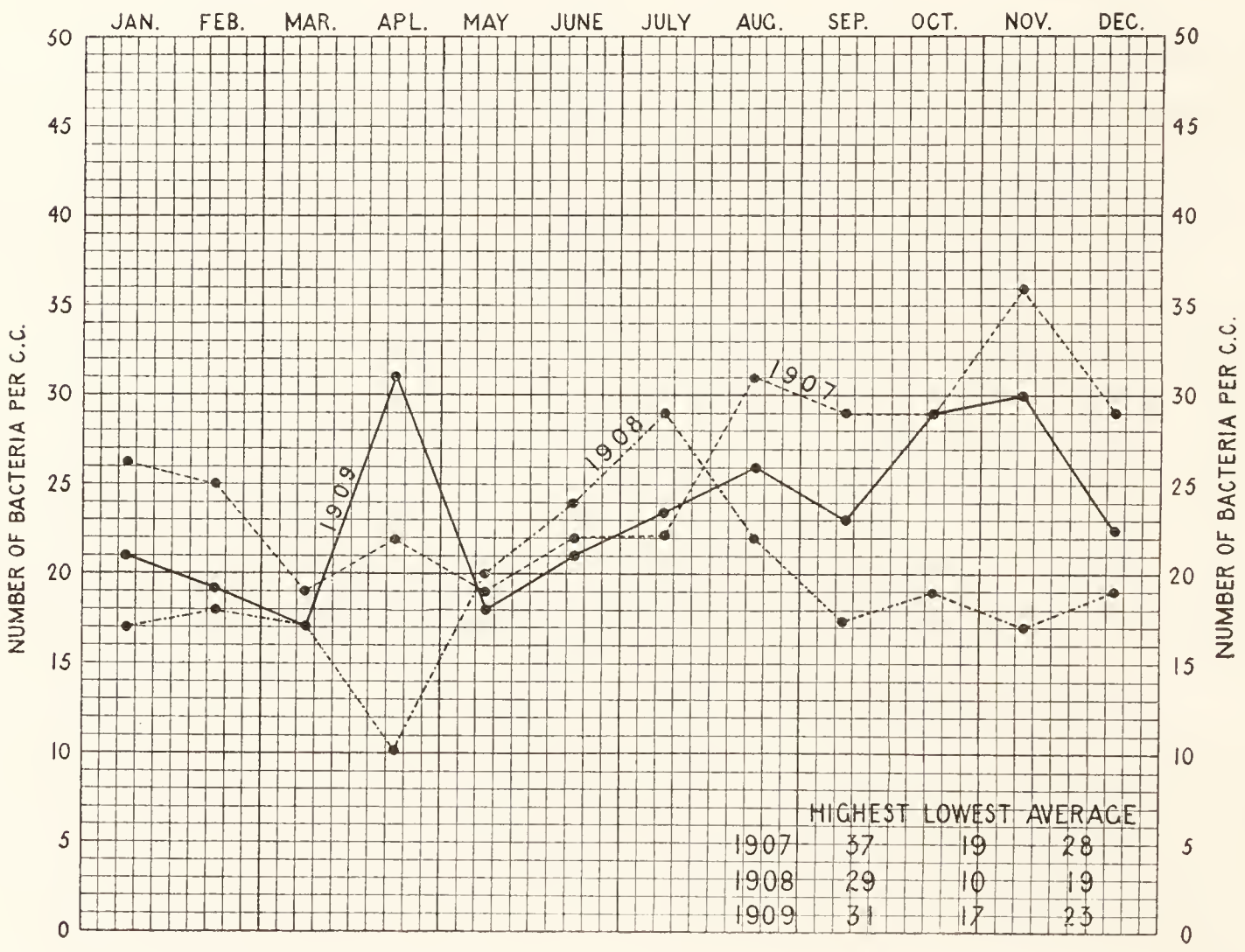
Actinomycosis	1
Anthrax	95
Mastitis	1
Rabies	2
Tubercle	14
Miscellaneous	15
Total	128

WATER ANALYSES.

The quality of the water supplied to Liverpool, as indicated by the daily examinations, show that its great bacterial purity has been well maintained for the year 1909, the average number of bacteria being 23, the B. enteritidis sporogenes being absent in all cases, and the colon bacillus was only found on a few occasions in the quantity of water examined, viz., 50 c.c. and 100 c.c.

The following diagram illustrates the variation in the total number of bacteria per month during the years 1907, 1908, and 1909 :—

DIAGRAM ILLUSTRATING MONTHLY AVERAGE VARIATION IN THE TOTAL NUMBER OF BACTERIA IN LIVERPOOL MAIN WATER.



CLEANSING AND SCAVENGING.

CLEANSING AND SCAVENGING.

The washing of streets, courts, back passages, &c., and the improvement in scavenging have been extended during the past year with beneficial results.

During the summer season the street washing was continued:—

249 streets were washed once a week,
260 streets ,, ,, twice a week,
53 streets ,, ,, three times a week, and
193 streets ,, ,, as occasion required,

and all passages and tunnel entrances to courts were also regularly washed.

Owing to the defective planning of many minor streets and the absence of adequate back passages some difficulties have yet to be overcome before the collection and removal of domestic refuse can be regarded as satisfactory. The concessions which have been made by the Health Committee for the substitution of sanitary ashbins for the old insanitary ashpits have resulted in a distinct sanitary advantage.

The following is a statement of the number of improved sanitary ashbins which were fixed at the 31st December, 1909;—

In properties assessed at over £10 per annum and new properties	29,872
In properties of £10 assessment and under	24,229
Total	54,101

The number of brick ashpits has been reduced from 65,000 to approximately 33,000.

Under the Bye-laws now in force, all newly-erected houses must be provided with suitable ashbins.

All private, domestic and office drains are flushed by the City Engineer's Staff twice a year, and there can be no question that a more frequent and very thorough flushing would be attended with great advantage.

The City Engineer has kindly supplied the following tables, which indicate the operations carried out by the Cleansing Staff under his control:—

TABLE No. 1.

NIGHT SERVICE

FOR EMPTYING COURT, &c., ASHPITS AND MIDDENS.

Middens have been practically abolished in the Old City, and consequently the operations of the night service are limited to the removal of domestic and office refuse from the neighbourhood of the Exchange, where it is impracticable to perform the work during business hours.

In the year 1900 an Improved Sanitary Ashbin was introduced, and 2,400 of these Bins have now been fixed for the use of Courts.

Notices Received.	Collections from Ashpits, etc.	Quantity of Ashes Collected.	Quantity of Refuse Deposited at Chisenhale Street Depot.	Average Working Staff per night.				Analysis of Work.		Average quantity removed from each Ashpit at each Collection
				Ashpit Men.	Wharf Men.	Carts.	Horses.	Loads per Man per Night.	Loads per Cart per Night.	Cart Loads.
No.	No.	Loads.	Loads.	No.	No.	No.	No.			
128	1,950	1,294	1,294	3·0	1·0	1·0	1·0	1·40	4·21	·66

TABLE No. 2.

SERVICE FOR THE COLLECTION AND REMOVAL OF DRY ASHPIT ASHES.

The number of notices received to empty ashpits during the year 1909 was 0·43 per cent. of the total collections.

The number of brick ashpits within the City is approximately 33,000.

From the year 1898 to the 31st December, 1909, Improved Sanitary Ashbins have been fixed as follows:—

In properties of over £10 assessment, and new properties	29,872
In properties of £10 assessment and under	24,229
	54,101

During this period the number of brick ashpits has been reduced from approximately 65,000 to 33,000.

In premises unsuitable for fixture bins, 27,500 loose bins have been provided.

During the year 1909 each ashpit was emptied on an average 11·09 times. The total quantity of refuse collected was 41,223 loads, or 0·11 of a load from each ashpit at each collection.

Notices Received.	Total Collections from Ashpits.	Dry Ashes.									Average Daily Working Staff.			Analysis of Work.		Average quantity removed from each Ashpit at each Collection
		Quantity of Refuse Removed.	Depots at which Refuse was Deposited.								Ashpit Men.	Carts and Wagons.	Horses.	Loads per Man per day.	Loads per Cart per Day.	
			Chisenhale Street.	Rathbone Road Destructor.	Smithdown Road Destructor.	St. Domingo Destructor.	Lavrock Bank Destructor.	Garston Destructor.	Sandhills.	Various Tips, &c.						
No.	No.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.						Loads.
1,608	366,154	41,223	8,284	3,473	4,968	8,313	4,090	2,319	1,631	8,145	123·15	30·30	25·20	1·07	4·37	·11

TABLE No. 3

SERVICE FOR THE COLLECTION AND REMOVAL OF BELL-CART AND BIN ASHES.

The Bell-cart service provides for the daily removal of domestic refuse from shops, business premises, and dwelling-houses where no provision is made for the storage of this description of refuse. This service has to be conducted within limited hours of the morning to suit the convenience of occupiers, and the exigencies of business.

Quantity of Bell-Cart and Bin Ashes Collected.	Depôts at which Refuse was Deposited.								Average Number of Carts Employed per day.	Average Quantity of Refuse Collected per day.
	Chisenhale Street.	Sandhills.	Rathbone Road Destructor.	Garston Destructor.	Smithdown Road Destructor.	Lavrock Bank Destructor.	St. Domingo Destructor.	Various Tips, &c.		
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	No.	Loads.
92,703	25,984	774	7,952	2,426	15,304	17,160	15,109	7,994	90·93	297·12

TABLE No. 4.

SERVICE FOR FLUSHING AND CLEANSING TROUGH WATER-CLOSETS, &c.

The frequent flushing of trough water-closets is a sanitary measure, this type of closet being provided principally in the more densely-populated areas of the City.

A large number of the public urinals and trough water-closets are also cleansed and disinfected twice daily during the Summer season, and once daily during the remaining part of the year.

Underground Urinals.	Overground Urinals.	Trough Water-Closets.	Average Working Staff per day.	
			Trough W. C. Men.	Urinal Men.
No. and Stalls.	No. and Stalls.	No.	No.	No.
26—214	152—527	1,134	26·76	17·07

TABLE No. 5.

SERVICE FOR THE CLEANSING OF STREETS, COURTS, AND PASSAGES, AND COLLECTION OF REFUSE.

Total Quantity of Refuse Collected.	Depôts at which Refuse was Deposited.					Average Daily Staff.				Average Number of Loads Removed Daily per Cart.
	Chisenhale Street.	Sandhills.	Wavertree.	Destructors.	Various Tips, &c.	Sweeping Machines.	Average Number of Men Employed.	Carts.	Horses.	
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Per day.	Per day.	No.	No.	No.
65,096	25,898	8,630	5,625	4,182	20,761	5·79	474	61·77	67·56	3·11

TABLE No. 6.

CLEANSING AND REMOVAL OF REFUSE FROM STREETS, COURTS, AND PASSAGES ON SUNDAYS.

On Sunday mornings a number of the principal streets in the central parts of the City are cleansed, and, as a sanitary measure, the domestic refuse in certain districts of the City is also collected.

Street Sweepings.												
Removed.			Depôts where Deposited.								Average Daily Staff.	
			Chisenhale Street.		Sandhills.		Wavertree.		Tips.			
Saleable Refuse.	Unsaleable Refuse.	Total.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Men.	Horses.
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	No.	No.
2,239	1,842	4,081	1,689	854	498	343	52	—	—	645	274·76	42·09

TABLE No. 7.

SERVICE FOR STREET WATERING.

In connection with Street Watering approximately 40 million gallons of Water were distributed during the season, in addition to which a large quantity was used for street washing.

Number of Days on which Carts were out during year.	Quantity of Water Distributed.		Average Daily Staff employed during the Season.			Average No. of Loads distributed Daily per Cart.
	Large Loads. Day.	Small Loads. Day.	Watermen.	Motor Tank.	Carts and Horses.	
123	123,863	17,547	20·59	·29	30·04	Motor Tank ... 8·69 Horse-cart ...33·28 Hand-cart ...40·00

In addition to the figures in the above table 4,331 loads of water were distributed on the drives of Sefton and Newsham Parks.

DUST LAYING.

During the season 502,068 sq. yards Carriageways were treated with Dust Laying Compositions.
Of which 84,726 ,, ,, ,, in Sefton and Newsham Parks.

TABLE No. 8.

REMOVAL OF GARBAGE FROM ABATTOIR.

Loads Removed during year.	Where Deposited.		
	Chisenhale Street.	Sandhills.	Collingwood Dock.
1,355	1,355	—	—

TABLE No. 9.

RETURN OF HORSE MANURE COLLECTED FROM FIRE STATIONS AND CORPORATION STABLES, AND DELIVERIES TO CHISENHALE STREET DEPÔT, &c.

Total Quantity dealt with during the year.	DEPÔTS AT WHICH MANURE WAS DEPOSITED.		
	Chisenhale Street.	Sandhills.	Wavertree.
Loads.	Loads.	Loads.	Loads.
2,399	1,553	539	307

Of the above 786 loads were collected from Fire Stations.

TABLE No. 10.

DESPATCHES OF MANURE AND REFUSE.

DEPÔTS.	Quantity of Saleable Refuse.				Quantity of Unsaleable Refuse.				Clinker to Works.	Grand Total.
	Street Sweepings	Mixture.	Ordinary Refuse to Farmers.	Total.	Sea.	Destructors.	Tips.	Ordinary Refuse to Farmers.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Chisenhale St., by Flats...	11,712	4,512	33,611	49,835	...	...	...	...	...	49,835
Sandhills by Rail ...	...	334	7,279	7,613	...	...	...	...	...	7,613
Wavertree do. ...	5,625	...	...	5,625	...	...	...	...	...	5,625
Chisenhale Street and Sandhills, *vid* Collingwood Dock per Barge "Beta"	...	...	...	...	18,358	...	...	...	...	18,358
Clinker per "Beta"	...	...	...	...	10,200	...	...	...	...	10,200
Charters Street Destructor.	...	...	...	...	...	58,172				
Rathbone Road ,, ...	...	...	...	...	...	12,321				
Smithdown Road ,, ...	...	...	...	...	...	25,444				
St. Domingo ,, ...	...	...	...	...	...	37,792	...	...	...	171,936
Garston ,, ...	...	...	...	...	...	7,117				
Lavrock Bank ,, ...	...	...	...	...	...	31,090				
Sundry Tips.....	...	...	2,166	2,166	...	...	40,580	12,000	...	54,746
Clinker to Tips	...	...	...	...	...	...	678	...	...	678
Ground Clinker to Works...	...	...	...	...	...	...	...	...	25,524	25,524
Rough Clinker to Works ...	...	...	...	...	...	...	...	...	22,472	22,472
	17,337	4,846	43,056	65,239	28,558	171,936	41,258	12,000	47,996	366,987

The foregoing Table shows that not less than 366,987 tons of Town's refuse have been disposed of, and this large total does not represent the actual quantity collected and carted to the Wharves, as during the Winter months a proportion of the street sweepings is in a liquefied condition, and drains away before despatch of the refuse from the Wharves.

TABLE No. 11.

HORSES.

DAILY AVERAGE NUMBER EMPLOYED ON CLEANSING WORK.

Night Ashes.	Dry Ashes.	Bell Ashes.	Street Cleansing.	Sweeping Machines.	Markets.	Watering.	Abattoir.	Canals.	Destructors.	Various.	Daily Average Total
0·90	23·01	83·68	61·29	5·77	1·34	10·90	1·43	1·41	14·31	3·26	207·30

TABLE No. 12.

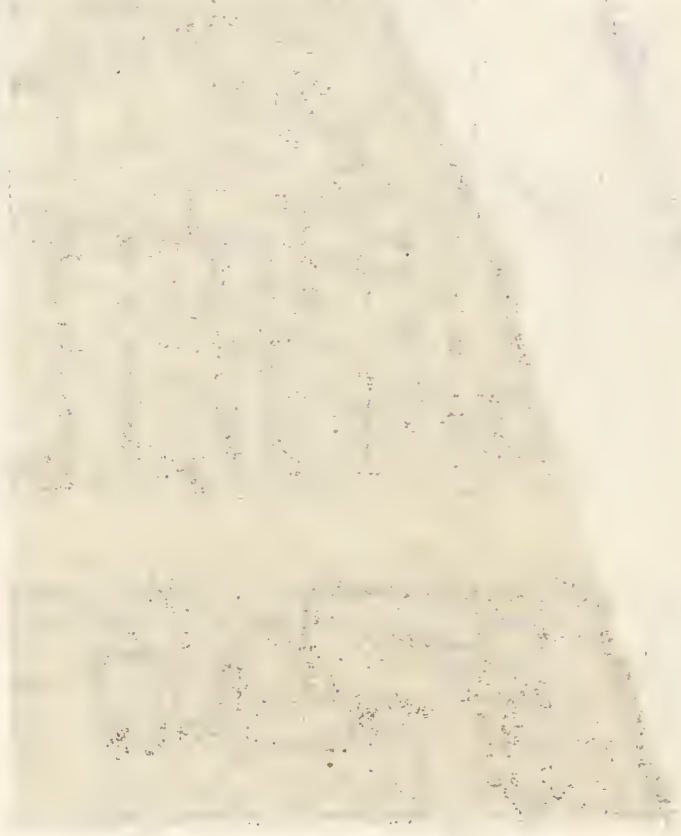
AVERAGE DAILY STAFF OF MEN EMPLOYED.

General		Night Service.		Day Service.		Wharves, Depôts. &c.		
	Inspectors.	6·		Inspectors.	23·0		Foreman.	Chisenhale St. and Sandhills.	1·
	Timekeepers.	7·		Watchmen.	4·29		Labourers.		20·
	Clerks.	4·		Watermen.	7·49		Labourers.	Waverтree.	2·
	Total.	17·		Sweepers and Casual Men.	275·50		Labourers.	Various Tips.	7·
	Working Foreman.	1·		Cart Followers (Sweeping and Bell and Box Ashes).	171·29		Labourers.	Collingwood Dock.	2·
	Midden Men.	3·		Passage Men.	55·59		Total.		32·0
	Wharf Man.	1·		Washing Streets & Passages	23·78		Grand Total.		82·81
	Total.	5·		Gully Men.	13·56				
				Washing Courts.	2·83				
				Trough Water Closet and Urinal Men.	43·83				
				Orderly Boys.	67·16				
				Ash Men.	113·26				
				Boat Men.	10·0				
				Hopper Barge Crew.	11·0				
				Waste Paper.	2·65				
				Private Work.	3.58				
				Total.	828·81				

INSANITARY PROPERTY.







CITY · OF LIVERPOOL

HOUSING OF THE WORKING CLASSES ACT, 1890.

BEVINGTON STREET UNHEALTHY AREA.



18738-1500-8/10 Est. H.

CITY OF LIVERPOOL

BEVINGTON STREET AREA, BLOCK PLAN

SHOWING NEW BUILDINGS & OPEN SPACES.

BOND STREET

ELDON STREET

BLOCK "A"

BACK ELDON STREET

ELDON PLACE

BACK ELDON PLACE

ARLEY ST TYPE (FLATS)

ARLEY ST.

MARSHAL PLACE

BLOCK "B"

BLOCK "C"

BLOCK "D"

NEW BACK STREET

BLOCK "E"

BLOCK "E"

BLOCK "G"

NEW ROADWAY 15'0"

TITCHFIELD STREET

SHRUBBERY

DRINKING FOUNTAIN

SHRUBBERY

BOYS PLAYGROUND
117'0"×98'0"
or 1274 sq.yds

SHELTER

SHELTER

SEAT

SEAT

BANDSTAND

SEAT

GARDEN

SHELTER

SHELTER

Sunk Garden

GIRLS PLAYGROUND
117'0"×92'0"
1196 sq.yds.

DRINKING FOUNTAIN

SHRUBBERY

SHRUB

BEVINGTON STREET

SELF. CONTAINED COTTAGES.

BACK STREET.

SELF CONTAINED COTTAGES.

BLOCK "H"

SHOP

LIME KILN LANE

SUMMER SEAT

SELF CONTAINED COTTAGES

EXISTING BACK STREET.

CORPORATION DWELLINGS.

WORK-SHOP

BLOCK "J"

SHOP

KEEPER'S HOUSE & OFFICE.

CURRIE ST.

ACCOMODATION AS UNDER

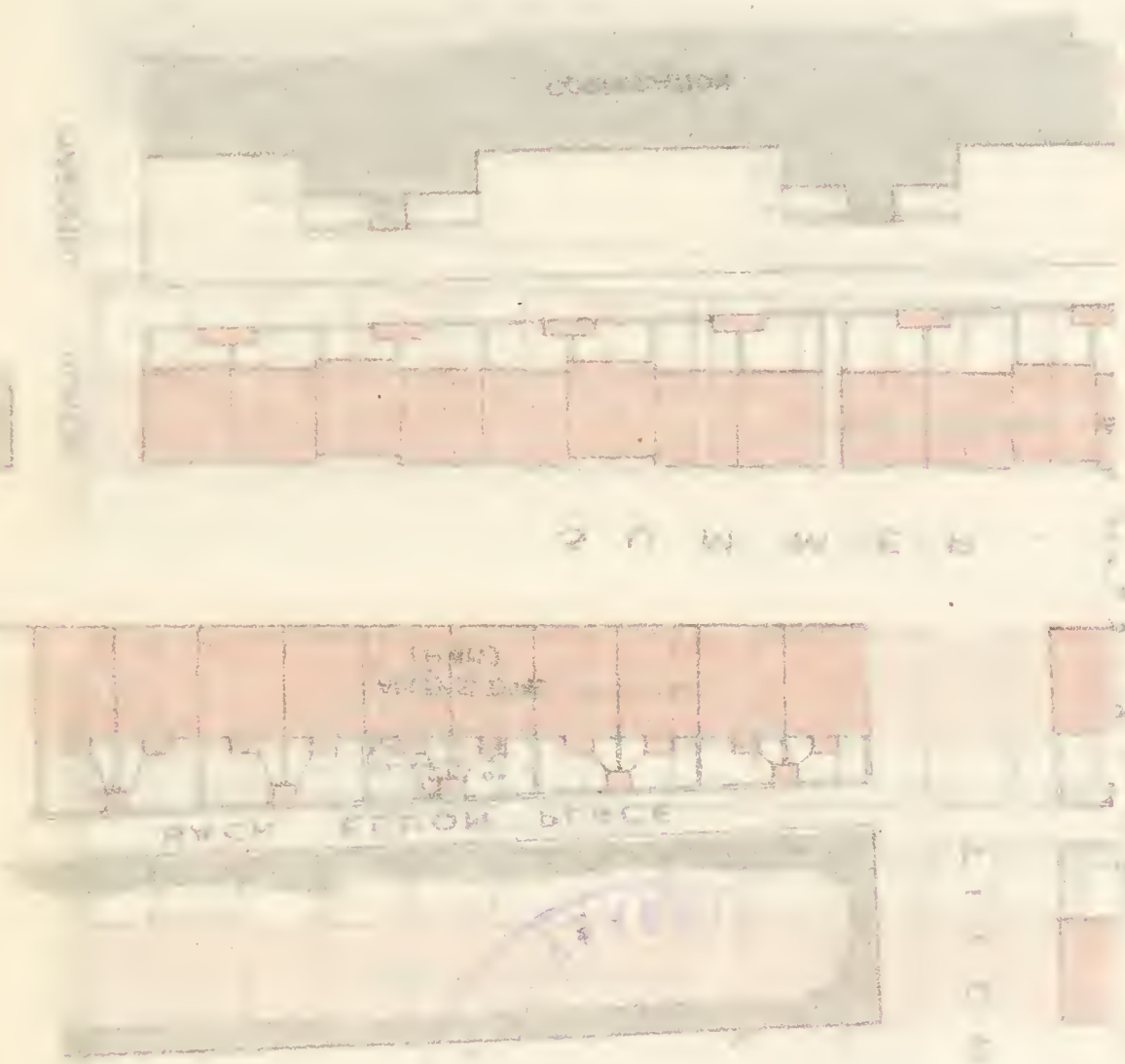
52 self-contained cottages.
containing 208 rooms
27 four roomed tenements or 108 " "
70 three do. do 210 " "
77 two do. do. 154 " "

TOTAL = 226 dwellings or 680 rooms.
Keepers House etc. 6 " "
FULL TOTAL of 686 rooms.
accomodating 1372 persons

SCALE OF FEET.

0 5 10 20 30 40 50 60 70 80 90 100 200 feet

GILDARTS GARDENS.



INSANITARY PROPERTY.

The following tables show the progress of the work of the Housing Committee during the last four years so far as it is concerned with the removal of insanitary property under the Housing of the Working Classes Acts 1890-1903.

Table 1.

Showing the number of houses dealt with during the year 1909, and indicating the action taken:—

			Courts.	Court houses.		Approx. No. of front houses.
Approximate number of insanitary houses existing on 1st January, 1909.			593	3389		1141
Proceedings authorised by the City Council during the year 1909, in regard to houses not previously referred to ...	Courts.	Court houses.			Front houses.	
"A" By Closing Orders ...	39	206			6	
"B" By schemes under the Housing of the Working Classes Act	—	—			—	
"C" Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	7	51			16	
"D" Dealt with by owners for private improvements ...	4	95			6	
Total No. dealt with during 1909	50	352			28	
Leaving for future consideration			543	3037		1113

Of the above 352 Court houses and 28 Front houses dealt with in the year 1909, 218 have been demolished, 72 rendered sanitary, 65 closed, and 25 are occupied.

Table 2.

Statement showing the number of houses dealt with during the year 1908, and indicating the action taken :—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1908.	No. of Houses.	Demo-lished.	Rend'red Sanitary.	Closed.	Occupied
"A" By Closing Orders	3	2	1	—	—
"B" By Schemes	—	—	—	—	—
"C" Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation.	32	4	28	—	—
"D" Dealt with by owners for private improvements.....	11	11	—	—	—
Total	46	17	29	—	—

COURT HOUSES.

How Dealt With.	Total No. of Houses. dealt with.	Demo-lished.	Rend'red Sanitary.	Closed.	Occupied
"A" By Closing Orders	104	47	25	29	3
"B" By Schemes	—	—	—	—	—
"C" Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	117	42	75	—	—
"D" Dealt with by owners for private improvements.....	53	53	—	—	—
Total No. dealt with during 1908	274	142	100	29	3

Table 3.

Statement showing the number of houses dealt with during the year 1907, and indicating the action taken:—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1907.	No. of Houses.	Demo-lished.	Rend'red Sanitary	In Schemes but still occupied	Closed
"A" By Closing Orders	23	20	2	—	1
"B" By Schemes	14	—	—	4	10
"C" Cases in which summonses have been issued, but for which Closing Orders were not obtained up to 31st December, 1907.	21	—	21	—	—
"D" Alterations and improvements authorised on circular letter or on action of Health Committee in asking for more closet accommodation.	55	14	41	—	—
Total	113	34	64	4	11

COURT HOUSES.

How Dealt With.	Total No. of Houses Dealt with.	Demo-lished.	Rend'red Sanitary	In Schemes but still occupied	Closed.
"A" By Closing Orders	111	80	16	—	15
"B" By Schemes	54	—	—	10	44
"C" Cases in which summonses have been issued, but for which Closing Orders were not obtained up to 31st December, 1907.	67	29	38	—	—
"D" Alterations and improvements authorised on circular letter, or on action of Health Committee in asking for more closet accommodation.	60	26	34	—	—
Total	292	135	88	10	59
Less Houses included in Schemes, but also dealt with by Closing Orders.	5	—	—	5	—
Total No. of Court Houses dealt with during year 1907	287	135	88	5	59

Table 4.

Statement showing the number of houses dealt with during the year 1906, and indicating the action taken:—

FRONT HOUSES.

Total No. of front houses dealt with during year 1906.	No. of Houses.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.
"A" Closing Orders.....	19	18	1	—	—
"B" By Schemes.....	102	18	—	48	36
"C" By Circular letter	72	13	59	—	—
Total	193	49	60	48	36

COURT HOUSES.

How Dealt With.	Total No of Houses dealt with.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.
"A" Closing Orders	329	280	30	—	19
"B" By Schemes.....	517	154	—	237	126
"C" By Circular letter	170	99	71	—	—
Total.....	1,016	533	101	237	145
Less houses dealt with by Closing Orders, and included in Schemes ...	50	16	—	—	34
Total No. of Court Houses dealt with during the year 1906	966	517	101	237	111

Table 5.

SUMMARY.

Showing total number of houses dealt with during the years 1906, 1907, 1908 and 1909:—

FRONT HOUSES.

Year.	Total No. of Houses dealt with.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.	Pending
1906	193	49	60	48	36	—
1907	113	34	64	4	11	—
1908	46	17	29	—	—	—
1909	28	11	17	—	—	—
Total	380	111	170	52	47	—

COURT HOUSES.

Year.	Total No. of Houses dealt with.	Demolished.	Rendered Sanitary.	In Schemes but still Occupied.	Closed.	Occupied.
1906	966	517	101	237	111	—
1907	287	135	88	5	59	—
1908	274	142	100	—	29	3
1909	352	207	55	—	65	25
Total	1,879	1,001	344	242	264	28

The nett result shows that during the four years 1906, 1907, 1908, and 1909, 1,112 insanitary dwellings have been demolished, 311 have been closed and await demolition or reconstruction, and 514 have been reconstructed and rendered sanitary, making a total for the four years of 1,937 (excluding those in schemes but still occupied), dealt with as follows:—

1906	874
1907	391
1908	317
1909	355
Total	1,937

RETURN OF HOUSES ERECTED 1896-1909.

	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Under £12	7	95	63	4	...	222	85	201	258	78	243	115	...	149
£12 to £18 ...	...	...	...	821	436	558	590	363	284	394	547	609	418	283
	944	1,138	1,276	...	...	...	...	...	...	...	...	...	...	...
£18 to £25 ...	...	...	...	769	602	633	962	1,058	1,067	872	1,039	1,022	1,102	1,369
£25 to £35	204	389	539	607	402	441	323	706	449	638	422	444	195	191
£35 and upwards	44	34	99	157	133	109	101	125	116	204	202	152	135	157
	1,199	1,656	1,977	2,358	1,573	1,963	2,061	2,453	2,174	2,186	2,453	2,342	1,850	2,149

LIVERPOOL SANITARY AMENDMENT ACT, 1864.

Under the provisions of the above Act, the Medical Officer of Health certified that the following premises were unfit for human habitation, and ought to be demolished:—

The court known as No. 4 court in Christian Street in the City of Liverpool.

The dwelling-houses numbered 1, 3 and 5 in the said No. 4 court.

The court known as No. 6 court in Christian Street aforesaid.

The dwelling-houses numbered 6 and 12 in the said No. 6 court.

The court known as No. 8 court in Christian Street aforesaid.

The dwelling-houses numbered 3, 6, 12 and 15 in the said No. 8 court.

The court known as No. 12 court in Richmond Row in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 13 in the said No. 12 court.

The court known as No. 6 court in Gay Street in the City of Liverpool.

The dwelling-house numbered 2 in the said No. 6 court.

The court known as No. 1 court in Sheridan Street in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 1 court.

The court known as No. 2 court in Great Homer Street in the City of Liverpool.

The dwelling-houses numbered 11, 12, 13, 14 and 15 in the said No. 2 court.

The court known as No. 4 court in Great Homer Street aforesaid.

The dwelling-houses numbered 3, 4, 9 and 10 in the said No. 4 court.

The court known as No. 8 court in Great Homer Street aforesaid.

The dwelling-houses numbered 5 and 9 in the said No. 8 court.

The court known as No. 10 court in Great Homer Street aforesaid.

The dwelling-houses numbered 3, 6, 7 and 10 in the said No. 10 court.

The court known as No. 12 court in Watkinson Street in the City of Liverpool.

The dwelling-houses numbered 1 and 3 in the said No. 12 court.

The dwelling-house numbered 54 in Watkinson Street aforesaid, contiguous to No. 12 court in the said street.

The court known as No. 1 court in Gore Street in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 1 court.

The dwelling-houses numbered 11 and 13 in Gore Street aforesaid, contiguous to No. 1 court in the said street.

The court known as No. 3 court in Gore Street aforesaid.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7 and 8 in the said No. 3 court.

The dwelling-houses numbered 15 and 17 in Gore Street, aforesaid, contiguous to No. 3 court in the said street.

The court known as No. 5 court in Gore Street, aforesaid,

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 in the said No. 5 court.

The dwelling-houses numbered 19 and 21 in Gore Street aforesaid, contiguous to No. 5 court in the said street.

The court known as No. 1 court (Mason Place) in Blair Street in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 1 court.

The court known as No. 3 court in Blair Street in the City of Liverpool.

The dwelling-houses numbered 3, 5, 7, 9 and 11 in the said No. 3 court.

The court known as No. 18 court in Hampton Street in the City of Liverpool.

The dwelling-houses numbered 3 and 4 in the said No. 18 court.

The court known as No. 20 court in Hampton Street aforesaid.

The dwelling-houses numbered 3 and 4 in the said No. 20 court.

The court known as No. 22 court in Hampton Street aforesaid.

The dwelling-house numbered 4 in the said No. 22 court.

The court known as No. 24 court in Hampton Street aforesaid.

The dwelling-houses numbered 3 and 4 in the said No. 24 court.

The court known as No. 12 court in Falkner Street in the City of Liverpool.

The dwelling-houses numbered 2 and 4 in the said No. 12 court.

The court known as No. 2 court in Burroughs Gardens in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 6, 7, 8, 9, 10 and 11 in the said No. 2 court.

The court known as No. 4 court in Burroughs Gardens aforesaid.

The dwelling-houses numbered 1, 2, 3, 5, 6 and 7 in the said No. 4 court.

The court known as No. 6 court in Burroughs Gardens aforesaid.

The dwelling-houses numbered 1, 2, 3, 5, 6 and 7 in the said No. 6 court.

The dwelling-house numbered 12 in Burroughs Gardens aforesaid, contiguous to No. 6 court in the said street.

The court known as No. 1 court in Kew Street in the City of Liverpool.

The dwelling-houses numbered 1 and 2 in the said No. 1 court.

The dwelling-houses numbered 5 and 7 in Kew Street aforesaid, contiguous to No. 1 court in the said street.

The court known as No. 5 court in Kew Street aforesaid.

The dwelling-houses numbered 1 and 2 in the said No. 5 court.

The dwelling-houses numbered 17, 19 and 21 in Kew Street aforesaid, contiguous to No. 5 court in the said street.

The dwelling-houses numbered 13 and 15 in Kew Street aforesaid,

The court known as No. 28 court in Bond Street in the City of Liverpool.

The dwelling-houses numbered 3 and 4 in the said No. 28 court.

The dwelling-house numbered 23, Titchfield Street in the City of Liverpool, contiguous to No. 28 court in Bond Street aforesaid.

The court known as No. 1 court in Back Bond Street in the City of Liverpool.

The dwelling-houses numbered 1 and 3 in the said No 1 court.

The dwelling-house numbered 15 in Back Bond Street aforesaid, contiguous to No. 1 court in the said street.

The court known as No. 1 court in Cotton Street in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3 and 4 in the said No. 1 court.

The court known as No. 1 court in Preston Street in the City of Liverpool.

The dwelling-houses numbered 3, 4 and 5 in the said No. 1 court.

The court known as No. 1 court in Harold Street in the City of Liverpool.

The dwelling-houses numbered 1 and 2 in the said No. 1 court.

The court known as No. 3 court in Harold Street aforesaid.

The dwelling-house numbered 1 in the said No. 3 court.

CORPORATION DWELLINGS.

Applications for these tenements, of which there are about 2,220, are referred to the Medical Officer for report; the total number received and investigated being 792.

These tenements are reserved for persons who have been dispossessed from their houses by any action of the Corporation, and only sober and well-conducted applicants are accepted.

Owing to a great number of the applicants stating that they were living in overcrowded houses, or insanitary cellars, the Housing Committee referred the applications to the Medical Officer of Health for investigation. These applications were dealt with by the Lodging House Inspectors, and in the event of there being any evidence of overcrowding, or illegal occupation of cellars, the application was marked accordingly, and returned to the Manager.

As the statements of many of the applicants were found to be incorrect, it was deemed necessary to make a closer investigation, and for this purpose night visits were paid in many cases.

In dealing with these applications, it was found that in 597 instances the circumstances of the applicant did not comply with the Committee's conditions. Of this number 159 applicants gave false addresses, and in 438 cases there was no evidence that the alleged overcrowding or illegal occupation existed. Of the remaining 195 cases investigated, 68 were found to be cases of one family overcrowding a house or cellar, occuping an insanitary house, or illegal occupation of a cellar. These were dealt with under the Public Health Act and the Housing of the Working Classes Act. One hundred and twenty-seven were claims on account of alleged overcrowding occurring in sub-let houses, of which, in 61 cases, it was found that there was no overcrowding, or the alleged overcrowding was easily remedied by some of the occupants leaving the premises, or by re-arranging the sleeping apartments.

There were 66 cases of overcrowding found in sub-let houses, and in 53 of these instances informations were laid against the chief tenants, and convictions followed.

The total number of cases of overcrowding in ordinary dwellings, cellars, and sub-let houses, and illegal occupation of cellars, was 134, arising out of 792 applications investigated, and in 125 instances the applicants were allowed to rent a Corporation dwelling.

In a considerable number of cases the overcrowding was of very recent date and the offence had evidently been committed with the intention of qualifying for a Corporation house. For instance, in 29 cases the length of tenancy ranged from three days to three weeks.

In some cases the applicants were found to be drunk at the time of the visit of inquiry. Five cases of drunkenness came under the notice of the Inspectors.

The total number of day visits paid during the year was 880, and 107 night visits were made, the total for the year being 987, from which it will be seen that a considerable amount of the Inspectors' time was taken up by investigating these applications.

SUPERVISION OF CORPORATION DWELLINGS.

During the year the manager of the dwellings referred 97 tenements to the Medical Officer's Department for night visitation, as against 118 referred during the year 1908.

Although the number of tenements suspected was less than in the previous year, there was an increase in the number of contraventions of the regulations, especially with regard to sub-letting, there being 25 cases of this character as compared with 14 last year.

Night visits were paid to these tenements, with the result that 25 tenements were found sub-let, of which 7 were also over-crowded. There were also 18 tenements found overcrowded, but not sub-let, *i.e.*, occupied by one family and their relations (or friends in some instances), and 23 cases of indecent occupation of sleeping rooms, viz.:—In 10 instances one man and two women were found in the same bedroom; in 2 instances one man and three women; in 4 instances two men and one woman; in 2 instances three men and one woman; and in 5 instances two men and two women. The total number of tenements wherein the foregoing



INSANITARY PROPERTY. BEVINGTON STREET AREA.
No. 24 Court, E—— Street.
The class of property with which Tuberculosis is usually associated.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
LIBRARY



INSANITARY PROPERTY. BEVINGTON STREET AREA.
No. 4 in 24 Court, E—— Street.
Kitchen of House.





INSANITARY PROPERTY. BEVINGTON STREET AREA.

No. 4 in 24 Court, E—— Street. Bedroom.

Type of room with which Tuberculosis is frequently associated.

(Contrast this with illustration marked * facing page 100.)





INSANITARY PROPERTY. BEVINGTON STREET AREA.
No. 4 in 24 Court, E—— Street.
Top Bedroom (Interior).

LIBRARY



BEVINGTON STREET INSANITARY AREA.





BURLINGTON STREET DWELLINGS.

Erected on the former site of insanitary property to re-house the dispossessed.



BURLINGTON STREET DWELLINGS.
Rear Portion.

irregularities were found was 46. Of the remaining 51 tenements 45 were found correct, 5 were found unoccupied, and in one case the Inspectors were unable to gain admittance.

During the year 66 cases of irregular or improper occupation were found in 46 tenements out of 97 visited, compared with 58 cases in 46 tenements out of 118 the preceding year.

Cases of overcrowding were not so numerous, 25 cases as against 39 in 1908.

One bad feature of the sub-letting and overcrowding cases was the indecent occupation of the sleeping rooms; 23 cases of this description were found, as against 14 last year.

The following illustrations may be given:—

GILDARTS GARDENS—TWO-ROOMED TENEMENT.

No. 1 Room was used as a kitchen.

In No. 2 Room of 980 cubic feet capacity, found the occupier's wife and her 5 children, also a man and his wife and their daughter, a total of 9 persons.

This was the worst case of indecent overcrowding found, the cubic space per head being only 109 cubic feet, instead of 400, the amount required in an ordinary registered sub-let house.

On a previous visit to this tenement the same number of persons had been found in the same room, but not the same lodgers.

ST. MARTIN'S PLACE—THREE-ROOMED TENEMENT.

In No. 1 Room of 1,299 cubic feet capacity, found 1 man and 2 of his children.

In No. 2 Room of 893 cubic feet capacity, found the chief tenant (a woman) and her grown-up son and daughter, also the wife of the man lodger in No. 1 Room was hiding under the bed.

In No. 3 Room of 1,074 cubic feet capacity, found a man lodger and his wife, also their son (aged 20 years).

The results of the night visits are communicated to the Manager of the Dwellings, who, where necessary, takes measures to abate the infringements.

The Corporation Surveyor has kindly supplied the following table:—

LIVERPOOL SANITARY AMENDMENT ACT, 1864.

INSANITARY PROPERTY.

INSANITARY PROPERTY PURCHASED, 1909.

Number of houses purchased by Housing Committee included in Reports referred by Council to Committee 43

INSANITARY PROPERTY DEMOLISHED, 1909.

Number of houses in respect of which Compensation for demolition was paid by Housing Committee included in Reports referred by Council to Committee 119

[NOTE.—The demolition of a great number of these houses has been accompanied by structural alterations to adjoining property, resulting in 7 "through" houses and 72 single houses being left standing. The term "through" houses signifies that two insanitary houses have been converted into one house and made sanitary by the introduction of through ventilation, with separate yard space and w.c. accommodation, whilst the single houses have also been somewhat similarly improved.]

HOUSING OF THE WORKING CLASSES ACT, 1890.

Number of houses purchased under various Improvement Schemes 525

Number of houses demolished under various Improvement Schemes 18

Maps showing a group of Insanitary Areas dealt with by the Corporation.

No. 1.

BLUE indicates dwellings erected by the Corporation on sites of insanitary property;
YELLOW indicates insanitary areas now scheduled for demolition;
RED shows existing licensed premises; and
BLACK, those closed within recent years, under the Act or by the Magistrates.
LICENSED PREMISES purchased by the Housing Committee for demolition, under the Housing of the Working Classes Acts, shown thus ◯





Map showing a group of insanitary AREAS (de

BLUE indicates dwellings erected pr
of insanitary property:
YELLOW indicates insanitary are
demolition:
RED shows existing licenses proposed
BLACK shows closed within recent ye
the Magistrates.
LICENSED PREMISES proposed pr
for demolition, under the Housin
Acts, shown like

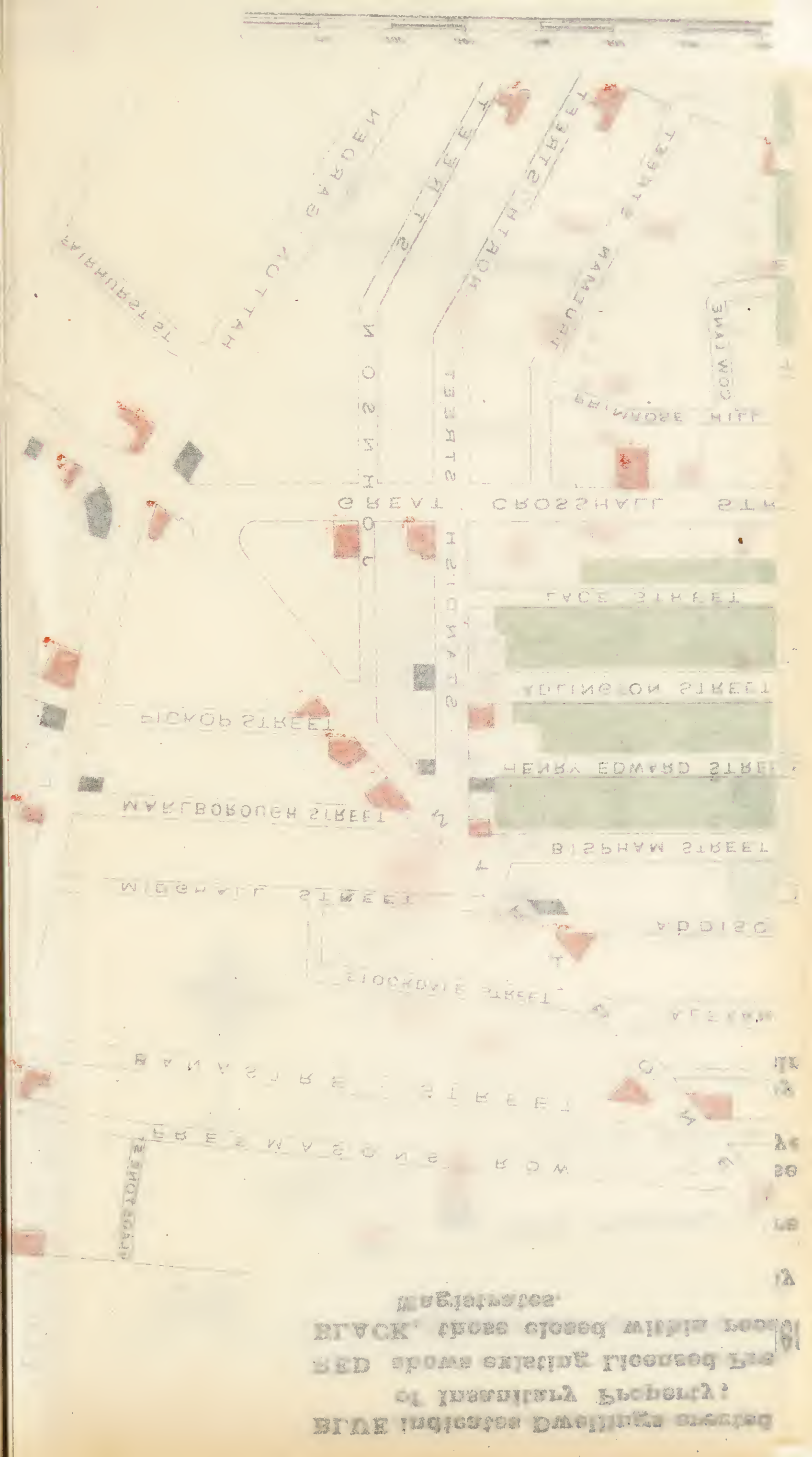
BLUE indicates Dwellings erected by the Corporation on Sites of Insanitary Property;

RED shows existing Licensed Premises;

BLACK, those closed within recent years by the Licensing Magistrates.

No. 2.




GREAT CROSSHALL STR
PENMROSE HILL
TEDEMAN STREET
HORTON STREET
HATTON GARDEN
FAIRHURST ST
ISLINGTON STREET
LACE STREET
ARLINGTON STREET
HENRY EDWARD STREET
BISHAM STREET
ADDISO
ALEXAN
MARLBOROUGH STREET
BERRY STREET
BLACK figures denote Freehold property.
RED spots exclusive licensed Pro
mortgagees.

INSANITARY PROPERTY

NUMBER OF HOUSES reported under each PRESENTMENT from JANUARY, 1865, to JUNE, 1904 (both inclusive).

DATE.	PRESENTMENT.	HOUSES REPORTED.	YEAR.	DEMOLISHED.
January, 1865...	1st Presentment.	101		101
July, 1865...	2nd ,,	95		95
January, 1866...	3rd ,,	190		190
,, 1869...	4th ,,	61		61
October, 1871...	5th ,,	76		76
August, 1880...	6th ,,	43		43
April, 1884...	7th ,,	373		373
December, 1884...	8th ,,	629		629
March, 1889...	9th ,,	86	1889	98
April, 1890...	10th ,,	368	1890	208
,, 1891...	11th ,,	501	1891	221
August, 1894...	12th ,,	299	1892	422
March, 1896...	13th ,,	240	1893	323
January, 1897...	14th ,,	799	1894	69
October, 1898...	15th ,,	304	1895	307
December, 1899...	16th ,,	666	1896	137
July, 1901...	17th ,,	346	1897	605
—	—	—	1898	471
June, 1904...	18th ,,	363	1899	511
—	—	—	1900	586
—	—	—	1901	190
—	—	—	1902	345
—	—	—	1903	157
—	—	—	1904	111
—	—	—	1905	605
—	—	—	1906	545
—	—	—	1907	190
—	—	—	1908	259
—	—	—	1909	119
No. of houses reported upon by the Medical Officer of Health, and purchased privately under the power of Act of 1882—May 1885 to April, 1888		5,540		8,047
		943		943
No. of houses included in Hornby Street, Upper Mann Street, Burlington Street, and Brassey Street Areas		928		928
No. of houses included in Beau Street, Bevington Street, Holly Street, Saltney Street, Frank Street and Grafton Street Areas..		793		
No. of houses reported on by Medical Officer of Health to Council, 1889-1904		930		
1905		166		
1906		297		
1907		162		
1908		122		
1909		159		
Total		10,040		9,918

HOUSING OF THE WORKING CLASSES ACT, 1890.

Return made to the Local Government Board, in pursuance of Sec. 44 of the Housing of the Working Classes Act, 1890, in respect of the year ended 31st March, 1910.

Buildings Unfit for Human Habitation.

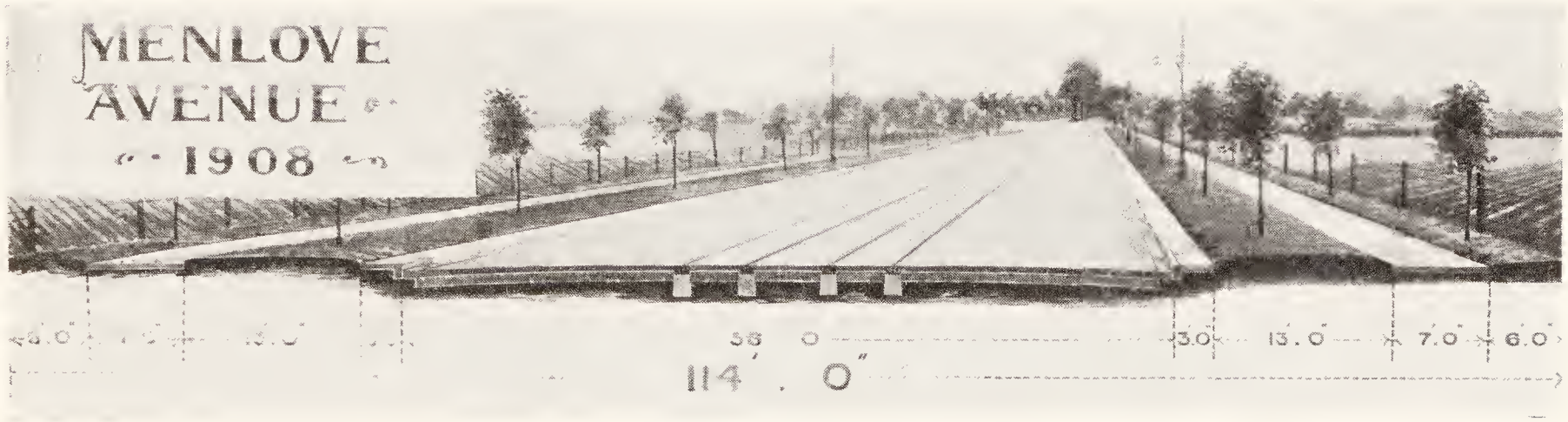
Number of dwellings in respect of which representations were made to the Local Authority during the year:—

(*a*) By the Medical Officer of Health 319

Number of dwelling houses in respect of which closing orders were made during the year 141

Number of dwelling houses ordered to be demolished by the Local Authority during the year (Sec. 33) 24





MENLOVE AVENUE.

Width 114 feet. Length, ¾ of a mile. Constructed 1909-10.

In connection with this scheme the Tramways Committee co-operated with the Health Committee and purchased the extra width between 84 feet and 114 feet for tramway purposes.

27 JUL



LARK HILL LANE WIDENING.

The land for widening the old portion of this road has been purchased on either side, and the full-grown trees on each side added to the footways; portions also have been laid out in grass.

SURGEON
LIBRA

CITY HOSPITALS.

HOSPITAL ACCOMMODATION.

The question of the permanent closure or reduction of the number of beds of Parkhill Hospital has from time to time engaged the attention of the Hospitals Committee during the past few years, and although it was obviously not safe to close the institution entirely, a considerable number of the beds have been put out of commission, viz., 200, and the staff correspondingly reduced.

In May, 1908, owing to the need of accommodation for cases of measles and the increased prevalence of scarlet fever, it became necessary to open two pavilions and to arrange for other pavilions to be re-opened in the following month. The number of beds retained in use at this hospital during the year was 235.

At the present time the number of beds available in the various hospitals is as follows:—

City Hospital North	162	beds.
,, South	100	,,
,, East	152	,,
,, Parkhill	235	,,
,, Fazakerley	350	,,
,, Fazakerley Annexe ...	160	,,
	1,159	,,

The approximate apportionment of beds is as follows, but the arrangement is modified as circumstances necessitate:—

Smallpox	160	beds.
Typhus Fever	10	,,
Typhoid Fever	50	,,
Scarlet Fever	639	,,
Diphtheria	90	,,
Measles	60	,,
Isolation	150	,,
		,,
	1,159	,,

The value of the hospitals, and the immense amount of useful work performed is shown by the fact that no less than 6,625 patients were treated within their walls, the great majority of these being cases of scarlet fever.

The tables which follow will show in detail a great deal of information relating to all of these cases, but it is of special interest to point out the much greater demands made by the public upon these institutions at the present time than formerly. The advantages of the hospitals are now so fully recognised by the public that the removal to hospital of their sick dependents is insisted upon, and claimed as a right. A few years ago, in cases similarly circumstanced, removal would never have been sought, and would even have been resisted.

The claims resulting from this enlightenment of the public cannot be met without expense, but it would be difficult to point to any example of necessary municipal expenditure in which the direct benefits, alike to the recipients and to the community, are so strongly marked.

The average duration of stay in hospital of patients whose treatment was completed during the year 1909 was as follows:—

Scarlet Fever Patients from	8 to 9 weeks.
Typhoid...	6 ,, 7 ,,
Typhus	4 ,, 5 ,,
Diphtheria	5 ,, 6 ,,

In many instances detention in hospital is very prolonged owing to the severity of the original illness, and the consequent slow convalescence of the patient.

Arrangements have been made between the Hospitals Committee and various Local Authorities to receive cases of infectious disease from districts beyond the city boundary, namely, Sefton Rural District, Waterloo and Seaforth, Great Crosby, Little Crosby, Allerton, Childwall, and the Children's Convalescent Home, West Kirby.

Special cases have been received from several other districts during the course of the year, but no permanent agreement was arranged, and application was made in connection with each particular patient.

Arrangements have also been made to deal with any case of cholera, yellow fever, or plague which may arise in any of the neighbouring urban or rural districts. A suitable charge is made in each case.

In addition to the foregoing, the disinfection of bedding and clothing is also undertaken for the Sefton Rural District Council.

Steps have been taken by the Committee to render the training of probationer nurses more efficient. Probationers are received at some, but not all, of the city hospitals, and under the arrangements now arrived at, the system, which will include lectures, as well as practical and clinical instruction, will render the course of training a very full and complete one.

On the recommendation of the Health Committee, a scheme, approved by the Port Sanitary and Hospitals Committee, was adopted by the Council in September, 1907, by which 24 beds at the City Hospital, Fazakerley, were to be devoted to the treatment of cases of Tuberculosis. The great success which has attended this experiment has sufficiently proved its value, and early in 1909 the number of beds for this purpose was increased to 50. The structural completeness of this hospital, the climatic and soil conditions obtaining, together with the exceptional facilities for laboratory work, render the hospital at Fazakerley particularly suited to this undertaking. Evidence is not yet available to show how far the great temporary improvement in the disease has been followed by its permanent arrest in those patients who have been discharged from Hospital, but a system is adopted by which they shall present themselves at regular intervals for examination. Patients subsequent to their discharge from the Sanatorium Wards continue, where necessary, under the observation of the inspectors of the Health Department. This measure has been adopted in a large majority of the cases, and has proved a valuable adjunct to hospital treatment. Attention has been given to the requirements of each individual patient, and the measures essential to the protection of the remaining members of the family have been stringently insisted upon under the direction of inspectors trained in this work. (See page 55).

The number of cases of epidemic diarrhœa removed to the City Hospital, Fazakerley, during 1909 was considerably less than in the preceding year. In some fatal cases included under this heading the diarrhœa was the determining cause of death in infants suffering from some pre-existing organic disease.

The following is an analysis of the varieties of feeding in 23 cases admitted :—

Breast alone—1.

Breast, supplemented with artificial foods—3.

Cow's milk, alone or combined with artificial foods—17. (In five of these cases the food given was of a nature suited to the age and condition of the child; in the remaining cases the food was indiscriminate and unsuitable.)

Not stated—2.

In two cases sterilised milk formed the sole article of diet at the time of the patients' admission to hospital, but on enquiry it was stated that this method had been resorted to only after the onset of the diarrhœa. The immunity from epidemic diarrhœa enjoyed by those who are fed solely on sterilised milk is in accordance with our experience of former years, and would indicate its employment in the case of all infants to whom mother's milk is not available.

Infantile diarrhœa, although reaching serious proportions in the summer and autumn months only, is probably endemic in all large centres of population during the remaining months of the year. In a disease so highly infective and, in its milder forms, of so protracted a course, it is possible that the sanitary measures upon which we chiefly rely in limiting its spread might receive further support if hospital treatment were extended more generally to cases occurring in the months of spring and early summer. Interesting clinical evidence of the infectious character of epidemic diarrhœa was afforded by the occurrence of three cases amongst the nurses employed in the ward set aside for the treatment of the infants suffering from this disease. In each instance the symptoms and complications were precisely those of the children under observation: a resemblance further sustained by the comparative serum reactions made with a bacillus isolated from a former case.

INFECTIOUS DISEASE.

The following table shows the number and nature of cases of Infectious Disease coming under the notice of the Medical Officer of Health during the year 1909, including those reported under the Notification Act.

Year—1909.	FEVER.				Smallpox.	Scarlatina.	Measles.	Diphtheria.	Membranous Croup.	Puerperal Fever.	Erysipelas.	Total.
	Typhus.	Typhoid.	Simple.	Relapsing.								
January	...	20	...	...	...	376	270	92	1	3	74	836
February	...	24	...	...	...	308	639	71	1	3	59	1,105
March	3	18	...	...	...	337	1217	82	...	8	59	1,724
April	...	20	...	...	...	374	674	92	...	5	71	1,236
May	5	32	...	...	...	362	1075	97	2	3	75	1,651
June	...	22	...	...	2	372	1441	99	...	8	51	1,995
July	3	16	...	...	...	280	229	86	...	7	74	695
August	...	18	...	...	...	266	174	78	...	5	47	588
September	...	23	...	...	...	317	145	98	...	4	57	644
October.....	...	26	...	...	3	318	132	108	1	1	79	668
November	2	23	...	...	1	375	230	110	3	6	56	806
December.....	4	36	...	...	3	374	130	110	2	9	67	735
Total	17	278	...	...	9	4,059	6,356	1,123	10	62	769	12,683
Removed to hospital	17	223	...	...	9	3,289	585	815	4	33	254	5,229

The number of patients removed to hospital includes those taken to general hospitals as well as those taken to the City Hospitals. (See page 153).

THE INFECTIOUS DISEASE (NOTIFICATION) ACT

The number of notifications received by the Medical Officer under the above Act, during the past five years, were as follows:—

	1905.	1906.	1907.	1908.	1909.
January ...	632	803	527	407	595
February	592	583	403	395	533
March ...	712	634	381	449	549
April ...	633	410	412	535	590
May ...	827	365	454	650	588
June ...	862	409	437	631	602
July ...	643	335	352	624	478
August ...	606	368	391	541	434
September	810	475	476	684	507
October ...	1,068	674	476	668	543
November	1,101	655	593	653	602
December	938	550	472	651	583
	9,424	6,261	5,374	6,888	6,604

The diseases were specified as follows:—

	1905.	1906.	1907.	1908.	1909.
Smallpox	11	110	25	4	7
*Chickenpox	2,254	636	—	—	—
Scarlet Fever	4,299	2,765	2,727	4,242	4,001
Typhoid Fever	378	510	546	490	331
Typhus Fever	84	46	91	34	24
Continued Fever	19	29	16	18	14
Remittent Fever	—	2	—	1	—
Relapsing Fever	2	1	2	—	1
Fever	2	1	1	1	2
Puerperal Fever	79	116	69	63	65
Diphtheria	1,021	915	970	1,104	1,278
Membranous Croup.	48	36	37	32	26
Erysipelas	1,225	1,087	847	896	846
¦Anthrax	2	7	15	3	9
†Cerebro-Spinal Fever	—	—	28	—	—
	9,424	6,261	5,374	6,888	6,604

* Not now notifiable.

† Scheduled as a notifiable disease for 6 months, from March, 1907.

¦ Scheduled as a notifiable disease for 3 years, from June, 1907.

NUMBER OF CASES REPORTED AND NUMBER REMOVED TO HOSPITALS, 1889-1909.

	Smallpox.		Scarlet Fever.		Typhoid.		Typhus.		Diphtheria and Membranous Croup.		Measles.	
	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.
1889 ..	9	8	1,832	533	670	302	158	124	122	39	3,175	104
1890 ...	2	2	3,520	938	506	296	103	87	212	55	4,013	152
1891 ..	21	21	1,176	448	588	350	175	156	237	49	2,262	160
1892 ...	177	177	1,554	603	699	345	73	70	227	29	3,376	150
1893 ...	75	73	3,538	1,380	1,396	728	183	168	250	30	2,316	94
1894 ...	229	226	3,963	1,415	1,350	745	325	312	337	47	2,494	122
1895 ...	130	127	2,710	1,039	1,306	662	162	158	340	77	3,462	93
1896 ...	8	8	3,584	1,589	1,063	539	305	298	533	120	2,930	138
1897 ..	6	6	3,001	1,641	991	559	158	156	430	118	4,389	94
1898 ..	17	16	2,424	1,467	863	585	92	84	554	191	2,458	105
1899 ...	10	10	2,416	1,537	988	668	70	64	793	277	5,107	140
1900 ...	156	154	1,968	1,198	731	450	42	41	709	312	2,372	108
1901 ...	37	37	3,310	1,814	864	567	55	54	870	467	6,766	185
1902 ...	560	559	5,914	2,994	1,026	670	155	155	1,102	516	7,141	177
1903 ...	1,720	1,719	4,053	2,145	681	462	272	266	878	412	2,728	114
1904 ...	27	27	2,988	2,214	434	296	97	97	1,061	690	9,453	428
1905 ...	15	14	4,308	3,147	325	235	98	95	1,003	606	3,938	322
1906 ...	19	19	2,959	2,191	491	360	52	49	910	567	6,819	389
1907 ...	19	19	2,741	2,144	482	373	116	116	929	631	5,640	342
1908 ...	7	7	4,295	3,528	447	360	21	20	1,017	721	4,653	227
1909 ...	9	9	4,059	3,289	278	223	17	17	1,133	819	6,356	585

The following tables, prepared by the Medical Staff of each Hospital, show the number of patients, the nature of the illness, and the results, at each of the six hospitals during the year 1909.

CITY HOSPITAL NORTH, NETHERFIELD ROAD.

Visiting Physician, Dr. R. I. RICHARDSON.

Resident Physician, Dr. E. A. WILLIAMS.

Diseases.	Remaining Dec. 31st, 1908.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.	77	709	—	786	249	—	407	88	6	42	5·9
Enteric Fever.	22	83	—	105	—	—	88	10	1	7	8·4
Typhus Fever	—	24	—	24	—	—	15	3	3	6	25·0
Diphtheria ...	—	4	—	4	4	—	—	—	—	—	—
Measles	1	7	—	8	—	5	3	—	—	—	—
Other Diseases	—	75	—	75	—	—	59	—	7	16	21·3
Isolation and Observation Cases	3	5	—	8	—	—	8	—	—	—	—
Totals ...	103	907	—	1,010	253	5	580	101	17	71	7.8

SCARLET FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	232	306	144	17	6	4	—	709
No. of Deaths	29	13	—	—	—	—	—	42
Percentage of Death	12·5	4·2	—	—	—	—	—	5·9

ENTERIC FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	4	26	26	15	10	2	—	83
No. of Deaths.....	—	1	1	1	2	2	—	7
Percentage of Deaths	—	3·8	3·8	6·6	20·0	100·	—	8·4

TYPHUS FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	1	3	6	6	7	1	—	24
No. of Deaths.....	—	—	—	1	5	—	—	6
Percentage of Deaths	—	—	—	16·6	71·4	—	—	25·0

DIPHTHERIA.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	2	2	–	—	—	—	—	4
No. of Deaths.....	—	—	—	—	—	—	—	—

OTHER DISEASES.

Disease.	Admitted.		Died.
Acute Miliary Tuberculosis	1	.....	1
Tubercular Meningitis	4	.....	4
Phthisis Pulmonalis	2	.....	—
Mesenteric Tubercle	1	.....	1
Meningitis	1	.....	—
Lobar Pneumonia	27	.....	7
Broncho-Pneumonia	7	.....	—
Bronchial Catarrh	1	.....	—
Follicular Tonsillitis	1	.....	—
Influenza	3	.....	—
Appendicitis	2	.....	—
Cerebral Softening	1	.....	1
Gastro-Enteritis	2	.....	1
Gastric Catarrh	6	.....	—
Myelogenous Leukœmia	1	.....	—
Parotitis	1	.....	—
Malaria	1	.....	—
Erysipelas	2	.....	—
Ophthalmia	1	.....	—
Pan-ophthalmitis	1	.....	—
Dementia	1	.....	—
Alcoholism	2	.....	—
Rheumatism	1	.....	—
Debility	2	.....	—
Hysteria	1	.....	—
Chicken Pox	1	.....	—
Nephritis and Cardiac Valvular Disease	1	.....	1
	75		16

Death rate=21·3%.

CITY HOSPITAL SOUTH, GRAFTON STREET.

Visiting Physician, Dr. N. E. ROBERTS.

Resident Physician, Dr. J. GREEN.

Diseases.	Remaining Dec. 31st, 1908.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.....	50	424	—	474	233	7	158	61	4	15	3·5
Enteric Fever.....	14	39	—	53	—	—	39	5	2	9	23·07
Typhus Fever	—	2	—	2	—	—	1	—	—	1	50·0
Diphtheria	—	1	—	1	—	—	—	—	—	1	100·0
Measles	—	87	—	87	—	—	84	—	—	3	3·4
Other Diseases.....	3	32	—	35	—	1	19	1	1	14	43·7
Isolation & Observation Cases.....	—	9	—	9	—	—	7	2	—	—	—
Totals	67	594	—	661	233	8	308	69	7	43*	7·2

* Including three deaths in patients admitted in 1908—one from Scarlet Fever, one from Endocarditis, and one from Tubercular Meningitis.

SCARLET FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	125	178	95	15	8	3	—	424
No. of Deaths	9	4	1	—	1	—	—	15
Percentage of Deaths	7·2	2·2	1·05	—	12·5	—	—	3·5

ENTERIC FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	—	6	6	13	11	3	—	39
No. of Deaths.....	—	2	1	2	3	1	—	9
Percentage of Deaths..	—	33·3	16·6	15·3	27·2	33·3	—	23·07

TYPHUS FEVER.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	—	—	1	—	1	—	—	2
No. of Deaths.....	—	—	—	—	1	—	—	1
Percentage of Deaths	—	—	—	—	100·0	—	—	50·0

DIPHTHERIA.

	Age Periods.							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases	1	—	—	—	—	—	—	1
No. of Deaths	1	—	—	—	—	—	—	1
Percentage of Deaths..	100·0	—	—	—	—	—	—	100·0

OTHER DISEASES.

Disease.	Admitted.	Died.
Malaise	9	—
Broncho-Pneumonia	1	1
Lobar Pneumonia	8	2
Measles, Diphtheria	1	—
Burns and Scarlet Fever	2	2 (a)
Tubercular Meningitis	1	2 (b)
Pneumococcal Meningitis	1	1
General Peritonitis	2	2
Tubercular Peritonitis	1	1
Erysipelas	1	—
General Tuberculosis	1	1
Gastro Enteritis	1	—
Carcinoma (prostate, &c.)	1	1
Malaria	1	—
Endocarditis	—	1 (c)
Whooping Cough	1	—
	32	14

Mortality=43·7 %.

(a) Accidents before admission.
(b) One admitted in 1908,
(c) Admitted in 1908.

CITY HOSPITAL, PARK HILL.

Visiting Physician, Dr. N. E. ROBERTS.

Resident Physician, Dr. B. A. I. PETERS.

Diseases.	Remaining Dec. 31st, 1908.	Admitted during the year.	Transferred from other City Hospitals	Total under Treatment during the year.	Transferred to Convalescent Hospital	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever	199	734	3	936	33	743	126	3	34	4·6
Diphtheria.....	12	159	—	171	—	141	23	2	7	4·4
Measles	11	242	—	253	—	232	—	2	21	8·6
Other Diseases	—	80	—	80	—	72	1	—	7	8·7
Isolation and Observation Cases.....	11	—	—	—	—	—	11	—	—	—
Totals	233	1215	3	1451	33	1188	161	7	69	5·6

SCARLET FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total.
No. of cases.....	202	306	178	39	10	2	—	737
No. of deaths	24	6	3	1	—	—	—	34
Percentage of deaths.....	11·8	1·9	1·7	2·5	—	—	—	4·6

MEASLES.

	Age Periods.							
	Under 5	5—10	10—20	20 – 30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	157	63	13	8	1	—	—	242
No of Deaths	21	—	—	—	—	—	—	21
Percentage of Deaths	13·3	—	—	—	—	—	—	8·6

DIPHTHERIA.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 up-wards	Total.
No. of cases	52	53	34	14	1	4	1	159
No. of deaths	2	4	1	—	—	—	—	7
Percentage of deaths.....	3·8	7·5	2·9	—	—	—	—	4·4

OTHER DISEASES.

Disease	Admitted		Died
*Tonsillitis	31	.....	—
*Suppurative Tonsillitis.....	4	.....	—
Cases under observation in isolation	27	.....	—
Cellulitis of Neck	1	.....	1
Marasmus	1	.....	1
Colitis	1	.....	—
Chicken-Pox	4	.....	—
Congenital Syphilis	2	.....	1
Lobar Pneumonia	2	.....	—
Broncho-Pneumonia	2	.....	1
Erysipelas	1	.....	—
Urticaria	1	.....	—
Cancrum Oris	1	.....	1
General Tuberculosis	1	.....	1
Severe Burns and Scarlet Fever	1	.....	1
	80		7

Mortality —8·7%.

* These include cases notified as Diphtheria in which the diagnosis was not confirmed.

CITY HOSPITAL EAST, MILL LANE, OLD SWAN.

Visiting Physician, DR. H. A. CLARKE.

Resident Physician, DR. A. E. HODGSON.

DISEASES.	Remaining Dec. 31st, 1908.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever...	73	498	—	571	100	—	363	80	5	28	5·6
Enteric Fever..	—	3	—	3	—	—	3	—	—	—	—
Diphtheria	38	348	—	386	—	—	298	43	22	45	12·9
Measles	—	13	—	13	—	—	9	—	1	4	30·7
Other Diseases.	11	102	—	113	—	—	83	12	6	18	17·6
Isolation and Observation Cases.....	—	15	—	15	—	—	12	3	—	—	—
Totals.....	122	979	—	1101	100	—	768	138	34	95	9·7

SCARLET FEVER.

	AGE PERIODS							
	Under 5	5 – 10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	150	191	130	22	5	—	—	498
No. of Deaths.....	21	3	3	1	—	—	—	28*
Percentage of deaths	14·0	1·5	2·3	4·5	—	—	—	5·6

* Twelve of these were cases of "Septic Scarlet Fever," sent into Hospital as "Diphtheria."

ENTERIC FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total.
No. of Cases.....	—	1	1	1	—	—	—	3
No. of Deaths.....	—	—	—	—	—	—	—	—

DIPHTHERIA.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases	136	139	51	17	5	—	—	348
No. of Deaths.....	29	15	1	—	—	—	—	45*
Percentage of Deaths	21·3	10·7	1·9	—	—	—	—	12·9

*Twenty-two, or 48·8% of these deaths took place within periods varying from five minutes to 48 hours after admission to Hospital.

OTHER DISEASES.

Disease.	Admitted.		Died.
*Tonsillitis	64	.....	—
Broncho Pneumonia	9	.....	7
Lobar Pneumonia	5	.....	3
Meningitis	3	.....	3
Syphilis	2	.....	—
Laryngismus Stridulus	1	.....	1
Pharyngitis	1	.....	—
Laryngitis	3	.....	—
Gastritis.....	1	.....	—
Dentition	3	.....	—
Rickets: Pneumonia	1	.....	1
Cerebral Apoplexy	1	.....	1
Pertussis: Broncho-Pneumonia	1	.....	1
Erysipelas	2	.....	—
Septicæmia	1	.....	1
Tuberculosis of Larynx	1	.....	—
Varicella: Broncho-Pneumonia	1	.....	—
Œdema of Tongue and Larynx	1	.....	—
Glossitis	1	.....	—
	102		18

Mortality = 17·6 %.

* This section comprises the cases which, sent in to Hospital as "Diphtheria," proved "Negative" on Bacteriological Examination.

CITY HOSPITAL, FAZAKERLEY.

Medical Superintendent, DR. C. RUNDLE.

Resident Physicians { DR. A. HIPWELL. DR. E. H. R. HARRIES.

Diseases.	Remaining Dec. 31st., 1908.	Admitted during the year.	Transferred from other City Hospitals	Total under Treatment during the year.	Transferred to other City Hospitals	Discharged Cured	Remaining at end of year	Died within 48 hours of Admission	Total Deaths	Total Mortality per cent. of Admissions.
Scarlet Fever	187	728	10	925	10	742	135	5	38	5·2
Enteric Fever.....	1	7	—	8	—	7	—	—	1	14·2
Tuberculosis	24	173	1	198	1	*139	50	—	8	4·6
Diphtheria	51	191	3	245	—	191	37	3	17	8·9
Erysipelas	11	105	1	117	—	101	3	7	13	12·3
Measles	—	137	5	142	13	101	21	—	7	5·1
Epidemic Diarrhœa.....	1	23	—	24	—	18	1	—	5	21·7
Other Diseases	22	194	17	233	2	161	21	16	49	25·2
Isolation and Observation Cases	2	11	1	14	—	10	4	—	—	—
Puerperal Fever	4	22	—	26	—	15	7	—	4	18·1
Totals	303	1591	38	1932	26	1485	279	31	142	8·9

* Disease improved or arrested.

SCARLET FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases.....	223	314	154	27	6	3	1	728
No. of Deaths.....	25	11	—	2	—	—	—	38
Percentage of Deaths	11·2	3·5	—	7·4	—	—	—	5·2

ENTERIC FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases	—	—	3	2	2	—	—	7
No. of Deaths	—	—	—	1	—	—	—	1
Percentage of Deaths	—	—	—	50·0	—	—	—	14·2

DIPHTHERIA.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards	Total
No. of Cases	50	88	31	17	4	1	—	191
No. of Deaths	9	7	1	—	—	—	—	17
Percentage of Deaths	18·0	7·9	3·2	—	—	—	—	8·9

OTHER DISEASES.

Disease.	Admitted.	Died.
Scarlet Fever and Whooping Cough	3	1
Scarlet Fever and Typhoid	1	—
Scarlet Fever and Diphtheria	14	5
Scarlet Fever and Varicella	6	—
Scarlet Fever and Rubella	3	1
Scarlet Fever and Measles	9	5
Rubella	9	—
Whooping Cough	12	3
Diphtheria and Measles	1	—
Diphtheria and Whooping Cough	2	—
Diphtheria and Varicella	1	—
Varicella	10	—
Mumps	1	—
Anthrax	1	1
Tuberculous Peritonitis	1	1
Acute Pulmonary Tuberculosis	1	1
General Tuberculosis	1	1
Syphilis	1	—
Septicæmia	1	—
Lobar Pneumonia	9	5

OTHER DISEASES—*Continued.*

Disease.	Admitted.	Died
Broncho-Pneumonia	9	8
Ulcerative Laryngitis and Pneumonia	1	1
Acute Bronchitis	1	—
Subacute Bronchitis	2	—
Empyema	1	—
Malignant Endocarditis	1	1
Acute Pericarditis	1	1
Meningitis	2	2
Convulsions	3	3
Hydrocephalus	1	—
Tonsillitis	15	—
Retro Pharyngeal Abscess	1	—
Enteritis	19	1
Appendicitis	1	—
Aphthous Stomatitis	1	—
Cancrum Oris	1	1
Erythema	3	—
Furunculosis	2	—
Impetigo	8	—
Acute Eczema	3	—
Cellulitis	3	1
Varicose Eczema of Leg	1	—
Varicose Ulcers of Leg	3	—
Carbuncle of Lip	1	—
Urticaria	3	—
Pemphigus	1	—
Abscess of Neck	1	—
Herpes of Nose	1	—
Abscess of Chin	1	—
Malnutrition	3	1
Anæmia	1	—
Infantile Scurvy	1	—
Diabetes Mellitris	1	—
Constipation	1	—
Suppurative Periostitis	1	—
Caries of Bone and Face	1	—
Retained Placenta	2	—
Carneons Mole	1	—
Premature Birth	2	2
Chronic Nephritis	1	—
Malignant Disease	1	1
*Carbuncle of Neck and Shoulder	1	1
*Empyema	1	1
	155	47

Mortality ... ... 30·3 %.

* Remaining 1908. Died 1909.

CITY HOSPITAL, FAZAKERLEY ANNEXE.

Medical Superintendent, DR. C. RUNDLE.

Diseases.	Remaining Dec. 31st, 1908.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Deaths.		Total Mortality per cent. of Admissions.	
									Direct Admissions.	Transfers from other City Hospitals.	Direct Admissions.	Transfers from other City Hospitals.
Scarlet Fever.....	109	219	658	986	66	798	110	4	9	3	4·1	0·45
Measles	5	118	8	131	5	118	—	1	8	—	6·7	—
Other Diseases.....	—	45	13	58	14	39	—	1	3	2	6·6	15·3
Isolation and Observation Cases	—	15	—	15	6	8	1	—	—	—	—	—
Totals	114	397	679	1190	91	963	111	6	20	5	5·03	0·73
									25			

SCARLET FEVER.

	Age Periods.							
	Under 5	5–10	10–20	20–30	30–40	40–50	50 upwards.	Total.
No. of Cases	45	100	58	13	2	1	—	219
No. of Deaths	4	4	—	1	—	—	—	9
Percentage of Deaths	8·8	4·0	—	7·7	—	—	—	4·1

OTHER DISEASES.

Disease.	Admitted.		Died.
Erysipelas	4	.....	—
Tonsillitis	1	.....	—
Gastro-Enteritis	1	.....	1
Scarlet Fever and Measles	7	.....	—
Scarlet Fever and Rubella	1	.....	1
Rubella	10	.....	—
Measles and Varicella	2	.....	—
Measles, Varicella and Whooping Cough	1	.....	—
Varicella	4	.....	—
Whooping Cough	8	.....	—
Measles and Whooping Cough	3	.....	—
Measles, Whooping Cough and Phthisis	1	.....	—
Whooping Cough and Scarlet Fever	1	.....	1
Varicella and Scarlet Fever	1	.....	—
	45		3
Mortality	6·6 %		

APPENDIX.

The following tables I, II, III, IV, V, and marked also A, B, C, D, E, are prepared pursuant to an instruction of the Local Government Board.

TABLE I.

Year.	Population estimated to Middle of each year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of non-residents registered in Public Institutions in the District.	Deaths of residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 year of age.		At all ages.						
		Number.	Rate.*	Number.	Rate per 1000 Births regist'd.	Number.	Rate.*				Number.	*Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1899.....	674912	22488	33·3	4481	199	16861	25·0	4278	592	7	16276	24·1
1900.....	680628	22762	33·4	4247	186	16393	24·0	4257	616	8	15785	23·1
1901.....	686332	21980	32·0	4138	188	15493	22·5	4231	618	4	14879	21·6
†1902.....	710337	24283	34·2	3936	162	15994	22·5	4564	602	4	15396	21·6
1903.....	716810	23910	33·3	3815	159	14848	20·7	4549	685	77	14240	19·8
1904.....	723430	24278	33·5	4780	196	16524	22·8	4587	673	35	15886	21·9
‡1905.....	733714	24350	33·2	3762	154	14849	20·2	4908	746	28	14131	19·2
1906.....	739180	24123	32·6	4194	173	15745	21·3	4985	744	60	15061	20·3
1907.....	746144	23654	31·7	3438	145	14408	19·3	4984	732	46	13722	18·3
1908.....	753203	23891	31·7	3403	142	14663	19·4	5319	733	76	14006	18·5
Averages for years 1899-1908.	716469	23571	32·8	4019	170	15577	21·7	4666	674	34	14938	20·8
1909.....	760357	23591	31·0	3437	145	14761	19·4	5388	779	72	14,054	18·4

A

* Rates in Columns 4, 8, and 13 calculated per 1000 of estimated population. † Garston included. ‡ Fazakerley included.

Note.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Area of District in acres (exclusive of area covered by water). 16,619.

Total population at all ages.....704,134
Number of inhabited houses 126,835
Average number of persons per house .....5·5
} At Census of 1901.

A—*Continued.*

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions, the deaths in which have been distributed among the several localities in the District.
Parish Workhouse, Brownlow Hill.	County Asylums.	Cancer Hospital.
Royal Infirmary.		Epileptic Hospital.
Children's Infirmary.		Leyfield Poor Law Schools.
Consumption Hospital.		Grove Mount Home.
Hahnemann Hospital.		Branch Workhouse, Luton Street.
Maternity Hospital.		,, Everton.
Eye and Ear Infirmary.		Cottage Homes, Fazakerley.
David Lewis Northern Hospital.		Walton Gaol.
Stanley Hospital.		Skin Diseases Hospital.
Royal Southern Hospital.		Accident Hospital, Garston.
Mill Road Infirmary.		Samaritan Hospital.
Hospital for Women.		Olive Mount Hospital.
City Hospital North.		
,, South.		
,, Parkhill.		
,, Fazakerley.		
Walton Workhouse.		
Belmont Road Workhouse.		
Toxteth Workhouse.		
Highfield Infirmary.		
Turner Memorial Home.		
St. Augustine's Home.		
Kirkdale Home.		
House of Providence.		
St. Joseph's Home.		
Home for Incurables.		
Tuebrook Villa Asylum.		
Nursing Homes.		

The three Union Workhouses are situated within the District.

TABLE II.

Names of Localities.	1.—Scotland District.				2.—Exchange District.				3.—Abercromby District.				4.—Everton District.			
Year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1899.....	53121	2125	1865	509	42951	1278	1634	314	52950	1695	1258	229	118940	4328	3143	880
1900.....	53049	2166	1830	521	42405	1332	1549	347	52645	1633	1303	252	120904	4442	2896	846
1901.....	52934	2044	1694	455	41831	1180	1299	285	52301	1565	1099	245	121953	4216	2902	819
1902.....	52876	2225	1745	492	41332	1216	1432	298	52004	1757	1155	220	122964	4627	2735	731
1903.....	52834	2267	1578	489	41332	1230	1244	261	51742	1713	1141	227	123521	4342	2656	768
1904.....	52763	2237	1732	577	41780	1275	1456	369	51445	1652	1065	220	123549	4444	2947	949
1905.....	52692	2170	1661	493	41674	1234	1311	297	51149	1715	1008	214	123741	4413	2471	705
1906.....	52621	2137	1633	528	41619	1227	1304	319	50855	1664	1032	201	123940	4422	2770	897
1907.....	52549	2098	1466	428	41168	1176	1278	295	50562	1709	929	161	123952	4307	2449	648
1908.....	52478	2058	1524	432	40775	1139	1181	284	50272	1820	947	194	122970	4219	2587	678
Averages of Years 1899 to 1908.	52791	2152	1672	492	41686	1228	1368	306	51592	1692	1093	216	122643	4376	2755	792
1909.....	51908	1953	1456	414	40288	1127	1254	285	49982	1857	914	155	121610	4182	2568	660

Note.—Population of each district corrected as per Census Returns of 1891 and 1901.

TABLE II.—*continued.*

Names of Localities.	5.—Kirkdale District.				6.—West Derby (West) District.				7.—Toxteth District.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1899	68801	2361	1578	434	84907	3086	1841	566	106268	3545	2678	711
1900	69132	2408	1552	470	85924	3019	1836	507	106393	3429	2496	681
1901	69410	2292	1438	448	86882	2921	1736	522	105922	3356	2349	632
1902	69798	2396	1494	402	87751	2986	1729	450	105636	3671	2421	630
1903	69984	2352	1301	338	88295	2996	1640	463	105532	3405	2141	573
1904	70271	2468	1573	528	89111	2902	1712	526	105399	3586	2380	685
1905	70310	2324	1381	405	89689	2891	1566	419	105290	3436	1935	509
1906	70450	2323	1373	378	90081	2853	1657	439	105162	3415	2299	614
1907	70492	2278	1315	357	90184	2758	1520	376	105033	3328	1954	487
1908	70536	2249	1421	330	89902	2749	1488	354	104905	3272	1926	460
Averages of Years 1899 to 1908.	69918	2345	1442	409	88272	2916	1672	462	105554	3444	2257	598
1909	70128	2213	1350	329	89633	2628	1599	364	104877	3280	1919	481

Note.—Population of each district corrected as per Census Returns of 1891 and 1901.

B—*Continued.*

TABLE II.—*continued.*

Names of Localities.	8.—Walton District.				9.—West Derby (East) District.				10.—Wavertree District.				11.—Sefton Park District (late Toxteth Rural).			
Year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each Year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1899	51779	1686	873	273	42454	1035	697	169	22746	704	372	114	28340	645	330	87
1900	53376	1754	855	245	43245	1161	749	155	24174	820	396	115	29381	598	315	63
1901	54977	1742	824	270	44016	1162	763	192	25670	888	411	147	30436	614	364	74
1902	56379	1897	887	250	44872	1302	721	146	27304	962	399	118	31579	603	397	93
1903	58032	1912	812	228	45736	1426	718	177	29018	980	414	116	32489	630	296	56
1904	59501	1898	986	298	46568	1479	791	216	30840	997	486	151	33441	664	389	92
1905	61127	2075	870	218	47428	1503	749	169	32774	1101	453	124	34530	654	374	62
1906	62043	1971	909	242	48112	1491	875	211	34832	1101	488	140	35079	689	342	62
1907	63017	2014	892	218	49212	1536	777	159	36018	994	393	99	37219	663	341	51
1908	64053	2154	874	189	52130	1606	845	178	39150	1099	476	115	37708	686	344	48
Averages of Years 1899 to 1908.	58428	1910	878	243	46377	1370	768	177	30252	964	428	123	33020	644	349	68
1909	65828	2140	885	231	55064	1618	881	200	43411	1096	436	97	38048	695	407	67

Note.—Population of each district corrected as per Census Returns of 1891 and 1901.

B—*Continued.*

TABLE II.—B—*Continued.*

Names of Localities.	12.—Garston District.			
Year	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.
	a.	*b.*	*c.*	*d.*
1899	16544	530	268	92
1900	16966	544	268	91
1901	17398	562	340	104
1902	17842	641	277	69
1903	18295	657	290	79
1904	18762	676	369	124
1905	19739	716	299	84
1906	20530	710	339	94
1907	22570	690	367	145
1908	23848	744	339	82
Averages of Years 1899 to 1908...	19249	647	315	96
1909	24748	688	290	78

Names of Localities.	13.—Fazakerley District.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 Year.
	a.	*b.*	*c.*	*d.*
1899	Statistics not available			
1900	1753	36	14	4
1901	1887	39	14	5
1902	2085	63	24	4
1903	2919	85	34	11
1904	3292	100	33	13
1905	3571	118	53	10
1906	3356	120	40	12
1907	4168	103	41	4
1908	4476	96	54	11
Averages of Years 1900 to 1908...	3112	84	34	8
1909	4778	114	58	16

Note.—Population corrected as per Census Returns of 1891 and 1901.

C

TABLE III.

Cases of Infectious Disease notified during the Year 1909.

Notifiable Disease.	Cases Notified in whole District.							Total Cases notified in each Locality.														Public Institutions (Workhouses and Hospitals).	Emigrants, Seamen, &c., passing through the City.
	At all Ages.	At Ages—Years.						Scotland.	Exchange.	Abercromby.	Everton.	Kirkdale.	West Derby (West).	Toxteth.	Walton.	West Derby (East).	Wavertree.	Sefton Park (late Toxteth Rural).	Garston.	Fazakerley.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.																
Small-pox	9	...	...	4	...	5	...	1	1	2 (W)	... (H) (W)	...	1	... (H-H)	1 (W)	... (H)	...	... (W)	...	... (H) (H)	...	3	3
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	1123	30	450	475	108	60	...	24	30	50	200	61	129	172	212	67	92	35	28	2	17	4	
Membranous croup	10	1	7	2	...	...	...	...	...	1	5	1	1	...	1	1	...	...	...	...	...	...	
Erysipelas	769	18	20	49	95	537	50	80	60	39	145	103	82	75	57	42	23	11	14	5	32	1	1
Scarlet fever	4059	78	1396	2284	228	123	...	102	122	95	813	261	485	549	649	314	339	152	39	36	81	22	
Typhus fever	17	...	...	4	1	12	...	4	2	...	2	1	4	2	1	...	...	1	...	...	...	...	...
Enteric fever	278	...	22	94	70	90	2	21	23	13	80	15	15	35	21	4	11	11	5	...	3	21	16
Relapsing fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	62	...	...	...	21	41	...	4	2	3	11	9	8	9	3	...	8	4	1	...	...	...	...
Anthrax	8	...	...	...	...	8	...	1	...	...	6	...	...	1	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Tuberculosis	968	28	102	226	246	363	3	125	58	120	91	66	137	155	58	67	31	20	4	...	...	6	
†Tuberculosis	3005	8	39	193	500	2241	24	475	504	319	599	130	190	396	79	194	28	8	28	1	...	54	
Totals	10308	163	2036	3281	1269	3480	79	837	832	642	1952	647	1052	1394	1082	689	532	242	119	44	133	111	

No. of Cases removed to Hospital from each Locality.														Public Institutions (Workhouses and Hospitals).	Emigrants, Seamen, &c., passing through the City.
Scotland.	Exchange.	Abercromby.	Everton.	Kirkdale.	West Derby (West).	Toxteth.	Walton.	West Derby (East).	Wavertree.	Sefton Park (late Toxteth Rural).	Garston.	Fazakerley.			
1	1	2	...	...	1	...	1	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	27	32	157	43	96	137	143	46	56	19	20	1	15	4	
...	...	...	2	1	...	...	1	...	...	...	...	...	...	...	...
14	11	3	17	13	13	10	5	3	6	...	3	1	...	1	
92	108	82	717	220	387	460	494	233	246	85	34	29	80	22	
4	2	...	2	1	4	2	1	...	...	1	...	...	...	...	...
10	7	2	43	12	2	11	8	2	2	6	...	...	...	16	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	2	2	6	6	4	2	2	...	4	...	1	...	...	...	...
1	...	...	6	...	...	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	10	4	54	12	37	23	23	5	3	1	...	1	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
152	168	127	1004	308	544	646	678	289	317	112	58	32	95	46	

(H) The localities in which the Isolation Hospitals are situated.
(W) The localities in which Workhouses are situated.
* Notification voluntary since February, 1901.
† Public Health (Tuberculosis) Regulations, 1908.

D

TABLE IV.

Causes of, and ages at, Death during Year 1909.

Causes of Death.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths at all ages of "Residents" belonging to Localities, whether occurring in or beyond the District.												Total Deaths whether of Residents or non-"Residents" in public Institutions in the District
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Scotland	Exchange.	Abercromby.	Everton.	Kirkdale	West Derby. (West).	Toxteth.	Walton.	West Derby. (East).	Wavertree.	Sefton Park.	Garston.	Fazakerley.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Measles	467	105	338	23	1	...	...	70	48	15	127	50	55	56	23	11	4	3	5	...	119
Scarlet fever	211	8	127	66	6	4	...	23	12	6	49	25	22	19	23	12	9	5	4	2	199
Whooping-cough	225	80	137	8	...	...	...	23	14	10	49	20	27	32	19	21	8	2	...	...	44
Diphtheria and membranous croup	115	8	67	38	...	2	...	10	3	6	18	10	20	14	9	11	5	3	6	...	76
Croup	7	1	5	1	...	...	...	...	...	1	2	1	1	1	...	...	1	...	...	...	..
Fever (Typhus)	6	...	...	...	...	6	...	1	1	...	...	...	2	2	...	...	...	...	...	...	8
Fever (Enteric)	47	...	1	10	9	27	...	5	5	5	5	5	4	9	2	...	1	3	2	1	39
Fever (Other continued)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic influenza	79	4	1	1	2	42	29	4	1	6	12	13	6	13	4	7	4	7	2	...	19
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Diarrhœa	520	317	171	4	...	6	22	86	61	25	105	63	49	72	24	15	8	7	5	...	65
*Enteritis	285	186	69	6	...	14	10	27	28	12	61	26	28	36	15	24	11	5	11	1	79
*Gastritis	191	101	39	12	2	28	9	63	4	3	51	18	11	18	2	11	7	1	1	1	10
*Puerperal fever	21	...	...	...	5	16	...	1	1	1	...	4	3	3	1	3	3	...	1	...	12
Erysipelas	25	5	...	...	1	17	2	...	3	1	3	4	4	...	4	2	1	1	1	1	21
Phthisis (Pulmonary Tuberculosis)	1048	9	17	38	171	789	24	97	127	89	187	99	117	129	54	63	33	24	26	3	559
Other tubercular diseases	370	81	145	68	27	48	1	22	31	20	59	34	60	54	26	26	18	13	6	1	138
*Cancer, malignant disease	634	...	...	2	1	457	174	32	28	45	105	69	86	91	49	57	21	35	13	3	276
Bronchitis	1700	318	164	10	7	603	598	195	198	108	333	180	194	205	88	100	44	28	21	6	609
Pneumonia	1449	310	465	66	63	426	119	190	128	98	247	116	172	236	69	79	41	36	38	4	407
Pleurisy	49	...	7	3	5	27	7	7	4	4	8	5	6	4	2	5	2	1	...	1	31
Other diseases of Respiratory organs	169	31	29	16	4	67	22	34	15	6	32	24	5	28	7	7	3	5	3	...	19
Alcoholism and Cirrhosis of liver	158	...	...	1	2	142	13	14	24	16	23	20	16	15	9	9	3	3	5	1	70
Venereal diseases	63	55	1	...	3	4	...	3	10	3	16	9	7	3	4	4	1	1	2	...	22
Premature birth	477	477	...	...	...	...	...	48	33	29	71	47	55	63	43	28	20	16	18	6	54
Diseases and accidents of parturition	52	...	...	...	10	42	...	2	3	3	7	6	12	8	4	4	2	1	...	...	21
Heart diseases	885	1	8	42	59	515	260	72	77	88	122	68	103	121	69	63	28	47	24	3	345
Accidents	513	104	92	58	21	170	68	71	46	36	107	43	58	69	34	24	10	5	8	2	300
Suicides	49	...	...	...	5	39	5	4	5	8	5	3	5	6	1	4	1	6	...	1	23
All other causes	4202	1176	360	139	113	1224	1190	352	344	270	764	388	471	612	300	291	147	149	93	21	1804
All other causes	14.017	3377	2243	612	517	4715	2553	1456	1254	914	2568	1350	1599	1919	885	881	436	407	290	58	5369

*See notes at back.

NOTES TO TABLES IV. AND V.

(*a*) In Table IV., all deaths of "Residents" occurring in public institutions, whether within or without the district, are to be *included* with the other deaths in the columns for the several age groups (columns 2-8). They are also, in columns 9-21 to be *included* among the deaths in their respective "Localities" according to the previous addresses of the deceased as given by the Registrars. Deaths of "Non-residents" occurring in public institutions in the district are in like manner to be *excluded* from columns 2-8 and 9-21 of Table IV.

(*b*) *See* notes on Table I. as to the meaning of "Residents" and "Non-residents," and as to the "Public Institutions" to be taken into account for the purposes of these Tables. The "Localities" in Table IV. should be the same as those in Tables II. and III.

(*c*) All deaths occurring in public institutions situated within the district, whether of "Residents" or of "Non-residents," are, in addition to being dealt with as in note (*a*), to be entered in the last column of Table IV. The total number in this column should equal the figures for the year in column 9, Table I.

(*d*) The total deaths in the several "Localities" in columns 9-21 of Table IV. should equal those for the year in the same localities in Table II., sub-columns c. The total deaths at all ages in column 2 of Table IV. should equal the gross total of columns 9-21 and the figures for the year in column 12 of Table I.

(*e*) Under the heading of "Diarrhœa" are to be included deaths registered as due to Epidemic diarrhœa, Epidemic enteritis, Infective enteritis, Zymotic enteritis, Summer diarrhœa, Dysentery and Dysenteric diarrhœa, Choleraic diarrhœa, Cholera (other than Asiatic or epidemic) and Cholera Nostras.

Deaths from diarrhœa secondary to some other well-defined disease should be included under the latter.

Deaths from Enteritis, Muco-Enteritis, Gastro-Enteritis, and Gastritis (see under the heading Diarrhœal Diseases in Table V.) in Tables IV. and V. should be placed immediately below, but separately from, those enumerated under the heading Diarrhœa as defined by enumeration above. This is particularly important for deaths under one year of age, as many of the deaths in infancy returned as due to Enteritis are really caused by Epidemic Diarrhœa. In the course of years, by the adoption of this recommendation, it will be practicable to ascertain the probable amount of transfer between these different headings.

(*f*) Under the headings of "Cancer" and "Puerperal fever" should be included all registered deaths from causes comprised within these general terms. Thus: Under "Cancer" should be included deaths from Cancer, Carcinoma, Malignant disease, Scirrhus, Epithelioma, Sarcoma, Villous tumour, and Papilloma of bladder, Rodent ulcer. Under "Puerperal Fever" are to be included deaths from Pyæmia, Septicæmia, Sapræmia, Pelvic peritonitis, Peri- and Endo-Metritis occurring in the Puerperium.

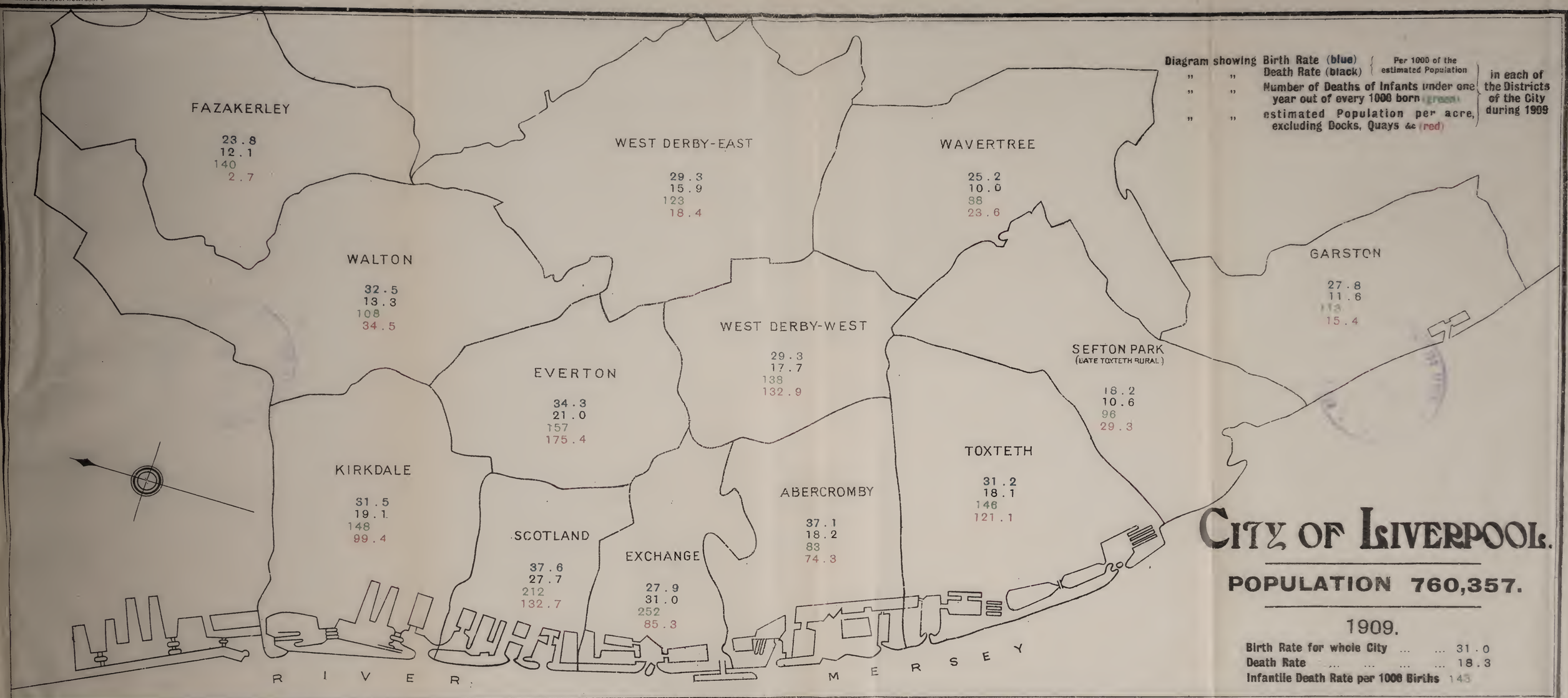
(*g*) Under "Congenital Defects" in Table V. are to be included deaths from Atelectasis, Icterus neonatorum, Navel hæmorrhage, Malformations and Congenital hydrocephalus.

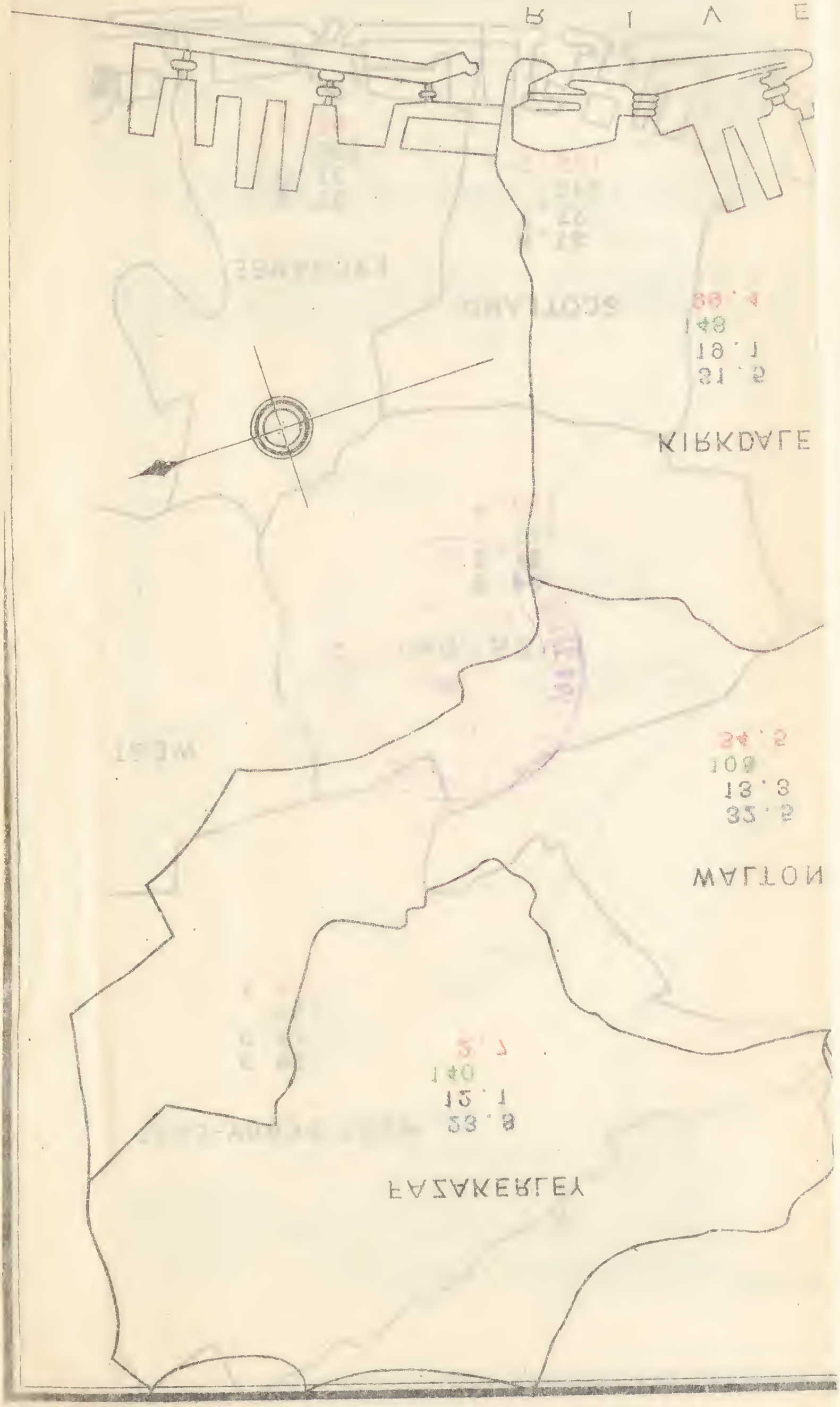
(*h*) Under "Tuberculous Meningitis" are to be included deaths from Acute hydrocephalus.

(*i*) Under "Other Tuberculous Diseases" are to be included deaths from Tuberculosis, Tuberculosis of bones, joints and other organs, Lupus and Scrofula.

(*j*) All deaths certified by registered Medical Practitioners and all Inquest cases are to be classed as "Certified"; all other deaths are to be regarded as "Uncertified."

D 10284. 2200. 4/10. Sch. 306. C




KIRKDALE
WATTON
FAZAKERLEY

F

DEATHS REGISTERED IN THE CITY OF LIVERPOOL,

DURING THE YEAR ENDING SATURDAY, 1st JANUARY 1910.

CAUSE OF DEATH	SEX. Males.	SEX. Females.	AGE—BELOW. 1	2	3	4	5	10	15	20	25	30	40	50	60	65	70	80	90	102
ALL CAUSES	7762	6999	3437	1296	512	284	197	426	218	252	425	561	970	1241	1601	933	869	1410	361	42
I. Zymotic and Septic Diseases	938	943	603	462	201	121	69	140	21	20	26	22	33	34	39	15	19	29	6	1
II. Diseases of Uncertain or Variable Seat.	305	423	9	2	3	3	1	3	1	...	1	8	17	110	238	91	75	93	7	...
III. Tubercular Diseases	899	604	91	61	46	30	31	70	46	92	120	133	316	245	156	36	20	10	...	...
IV. Constitutional Diseases	88	85	17	10	2	...	...	2	2	3	3	5	21	24	28	16	17	23	3	...
V. Diseases of the Nervous System	760	686	385	100	39	20	14	32	22	16	22	18	57	93	101	46	17	19	4	...
VI. Diseases of the Circulatory System	571	542	4	2	1	3	3	11	32	28	36	32	91	113	195	161	121	208	28	1
VII. Diseases of the Respiratory System	1863	1639	676	334	139	65	10	72	27	38	46	55	121	259	428	313	281	396	92	8
VIII. Diseases of the Lymphatic System	193	128	358	112	18	6	9	29	19	20	20	24	41	76	77	13	25	31	11	...
IX. Diseases of the Urinary System	6	12	...	...	1	...	...	1	...	...	...	...	...	1	1	1	...	...	2	...
X. Diseases of the Reproductive System	247	185	7	1	9	3	2	3	7	8	9	13	59	56	101	38	43	10	10	...
XI. Diseases of the Joints, &c	95	...	...	...	...	...	...	...	...	2	12	16	35	19	6	1	4	3	...	...
XII. Diseases of the Skin	18	41	7	...	2	2	2	4	6	1	...	...	...	4	3	...	...	...	...	...
XIII. Defects: Diseases	9	5	10	1	...	...	...	...	...	...	...	...	...	1	1	1	...	...	2	...
XIV. Developmental Diseases	960	976	1110	71	11	1	...	...	...	...	...	...	2	...	...	...	1	...	...	...
XV. Diseases of the Integumentary System	24	24	22	5	1	...	1	...	1	...	1	...	...	3	10	9	99	68	190	21
XVI. Violence, &c.	486	387	137	82	37	25	25	56	31	22	28	38	116	110	128	16	15	52	10	...
Causes ill defined or not specified	5	3	1	...	1	...	...	...	...	1	...	...	...	...	2	2	1	...	...	...

DISTRICTS.

WARDS.

	North and South Scotland	Vauxhall Exchange & St. Anne's	Castle Street & St. George's	Everton Brow & St. Domingo, Netherfield	Kirkdale and Southfield	Low Hill & Kensington	Prince's Park Granby, Rose Hill and Tuxteth	Walton and Anfield	West Derby (East) Tuxteth Park and Old Swan	Wavertree Wavertree West	Tuxteth Park East and West	Gerston and Aigburth	Fazakerley
ALL CAUSES	882	624	573	1087	933	1053	1286	656	722	342	349	216	47
I. Zymotic and Septic Diseases	135	85	52	302	151	189	161	71	62	27	22	18	...
II. Diseases of Uncertain or Variable Seat.	18	9	28	62	51	57	61	38	48	16	11	10	3
III. Tubercular Diseases	14	19	30	132	85	115	88	56	73	13	13	25	1
IV. Constitutional Diseases	...	1	7	18	10	10	6	10	11	7	10	6	...
V. Diseases of the Nervous System	109	17	49	142	117	93	153	86	93	41	33	13	1
VI. Diseases of the Circulatory System	29	31	64	80	53	78	93	49	64	28	21	23	1
VII. Diseases of the Respiratory System	281	193	133	160	212	267	308	129	165	76	68	45	5
VIII. Diseases of the Lymphatic System	98	35	38	127	60	51	81	36	56	20	21	13	5
IX. Diseases of the Urinary System	1	...	3	...	1	1	1	2	...	1	...	1	...
X. Diseases of the Reproductive System	12	17	16	33	22	23	33	29	26	5	15	11	1
XI. Diseases of the Joints, &c	...	1	5	8	7	8	10	3	1	1	...	...	...
XII. Diseases of the Skin	2	...	1	3	...	...	...	...	...	...	...	1	...
XIII. Defects: Diseases	2	...	...	3	...	2	3	4	...	...	...	...	...
XIV. Developmental Diseases	...	...	...	3	...	...	...	...	...	1	...	...	...
XV. Diseases of the Integumentary System	85	75	71	200	106	149	172	105	93	53	15	30	11
XVI. Violence, &c.	3	...	...	3	2	6	...	3	2	1	...	...	...
Causes ill defined or not specified	63	71	16	92	15	51	58	23	25	13	14	10	2
	...	1	...	1	...	3	...	1	...	1	...	...	1

PUBLIC INSTITUTIONS.

	Aberercromby District: Liverpool Workhouse	Royal Infirmary	Children's Infirmary	Maternity Hospital	Hahnemann Hospital	Consumption Hospital	Exchange District: David Lewis Northern Hospital	Scotland District: Stanley Hospital	Everton District: Netherfield Road Hospital	Toxteth District: Parkhill Hospital	Toxteth District: Grafton Street Hospital	Everton District: Shaw Street Hospital for Women	Toxteth District: Royal Southern Hospital	Everton District: Mill Road Infirmary	Walton District: Walton Workhouse	Walton District: Johnson Road Workhouse	Fazakerley District: Fazakerley Hospital	West Derby East: Mill Lane Hospital	Toxteth District: Toxteth Workhouse	West Derby (East): Highfield Infirmary	Other Institutions.	CITY OF LIVERPOOL.
ALL CAUSES	1060	319	219	27	12	6	221	142	73	70	43	33	204	779	806	178	173	95	114	204	191	14761
I. Zymotic and Septic Diseases	133	6	14	1	...	...	6	3	20	65	30	...	15	37	43	19	127	81	20	...	8	1881
II. Diseases of Uncertain or Variable Seat.	33	39	2	...	...	...	16	10	...	1	1	8	26	56	51	7	...	...	19	18	6	728
III. Tubercular Diseases	205	17	30	2	2	5	17	1	6	1	1	...	8	181	86	8	13	...	75	18	15	1503
IV. Constitutional Diseases	7	11	...	1	...	...	2	5	...	...	...	...	5	8	18	3	...	...	5	6	3	174
V. Diseases of the Circulatory System	47	19	27	...	2	...	16	7	...	...	...	...	16	97	60	34	4	1	43	51	34	1146
VI. Diseases of the Respiratory System	91	38	5	1	1	...	14	3	...	...	1	3	20	69	73	12	...	...	84	57	18	1113
VII. Diseases of the Digestive System	244	31	19	2	1	1	28	24	6	1	1	2	19	156	190	63	17	10	79	42	38	3193
VIII. Diseases of the Lymphatic System	33	57	29	1	2	...	21	15	1	...	2	1	13	30	44	6	3	...	5	1	1	921
IX. Diseases of the Urinary System	1	3	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	18
X. Diseases of the Reproductive System	1	3	...	...	...	...	1	...	...	...	...	...	1	14	20	28	3	...	13	3	4	422
XI. Diseases of the Joints, &c	17	47	3	2	3	...	13	8	...	...	...	...	1	3	3	3	...	...	...	...	...	95
XII. Diseases of the Skin	8	9	...	6	...	...	...	...	...	...	19	3	3	...	...	...	...	...	...	...	...	89
XIII. Defects: Diseases	1	2	3	...	...	...	6	1	...	...	...	...	1	3	...	1	...	...	...	...	1	29
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